A Descriptive Study of the Head Start Health Component

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LIST OF ABBREVIATIONS

Abbreviation	Unabbreviated Term
AAP	American Academy of Pediatrics
ACF	Administration for Children and Families
ACIP	Advisory Committee on Immunization Practices
ACYF	Administration on Children, Youth, and Families
ADD	Attention Deficit Disorder
ADHD	Attention Deficit Hyperactivity Disorder
AIDS	Acquired Immunodeficiency Syndrome
AOA	American Orthpsychiatric Association
CAA	Community Action Agency
CACFP	Child and Adult Care Food Program
CDA	Child Development Associate
CDC	Centers for Disease Control and Prevention
CDF	Children's Defense Fund
CDM	The CDM Group, Inc.
CPR	Cardiopulmonary Resuscitation
DBP	Diastolic Blood Pressure
DHHS	Department of Health and Human Services
DPT	Diphtheria, Pertussis, and Tetanus
EPSDT	Early and Periodic Screening, Diagnostic and Treatment
FY	Fiscal Year
GAO	General Accounting Office
HepB	Hepatitis B
Hib	*haemophilus influenzae* type b
HIV	Human Immunodeficiency Virus
HMO	Health Maintenance Organization

HSAC	Health Services Advisory Committee
HSCOST	Head Start COST System
HSFIS	Head Start Family Information System
HSMTS	Head Start Management Tracking System
IM	Information Memorandum
LPN	Licensed Practical Nurse
MMR	Measles, Mumps, and Rubella
MMWR	Morbity and Mortality Weekly Report
NCHS	National Center for Health Statistics
NHANES II	National Health and Nutrition Examination Survey Phase II
NHIS	National Health Interview Survey
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OPV	Oral Polio Vaccine
OSPRI	On-Site Program Review Instrument
OTA	Office of Technology Assessment
PIR	Program Information Report
PNSS	Pediatric Nutrition Surveillance System
PPS	Probability Proportional to Size
RN	Registered Nurse
SBP	Systolic Blood Pressure
STD	Sexually Transmitted Disease
TANF	Temporary Assistance for Needy Families
TB	Tuberculosis
USDA	United States Department of Agriculture
WIC	Special Supplemental Food Program for Women, Infants and Children

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1.0 INTRODUCTION

Founded in 1965, the Head Start program offers comprehensive services including early education, nutrition, health, and social services, along with a strong parent involvement focus, to low-income children nationwide. Its overall goal is to bring about a greater degree of social competence, which is defined as a child's everyday effectiveness in dealing with both his or her present environment and later responsibilities in school and life, taking into account the interrelatedness of cognitive, intellectual, and social development; physical and mental health; and nutritional needs.

Head Start programs are funded through a direct Federal-to-local relationship, and include a wide range of programs that are community based, so they can respond to local needs and coordinate activities with other community agencies. They are guided by a set of Program Performance Standards that specify requirements in each of the functional areas, including disabilities.

The Head Start Bureau within the Administration on Children, Youth and Families (ACYF) in the Administration for Children (ACF), U.S. Department of Health and Human Services, (DHHS) has responsibility for oversight and leadership of Head Start programs nationwide. It also funds special initiatives, and develops legislative and budget proposals for programs. Local ACYF oversight is provided by 12 Regional Offices, which conduct compliance reviews of local programs every three years.

During fiscal year 1994, the year in which study data for this report were collected, Head Start served an estimated 740,000 children and their families in almost 2,000 programs nationwide. The FY 1994 budget was $3.3 billion (General Accounting Office, 1994).

In 1993, with an eye toward the future of Head Start, the Secretary of DHHS formed the Advisory Committee on Head Start Quality and Expansion. This Committee issued a

document, *Creating a 21st Century Head Start: Final Report of the Advisory Committee on Head Start Quality and Expansion* (1993), which contained a number of recommendations for Head Start as the program prepares for the next century. Among others, the report recommended improvements in Head Start staff training in order to increase the quality of the services provided, and expansions in the numbers of children served and the range of services provided to Head Start children and their families. This report also called for improving community partnerships to more effectively meet the needs of Head Start families in the areas of family support, health, and education. Finally, the Advisory Committee recommended strengthening Federal oversight of Head Start. The collection of reliable and valid baseline information on the Health Component can assist Federal staff in accurately identifying program needs.

Also in 1993, DHHS' Office of the Inspector General (OIG) focused attention on Head Start by issuing a report on the implementation of expansion funds entitled *Evaluating Head Start Expansion Through Performance Indicators* (OIG, 1993). This study covered many aspects of Head Start, including the Health Component. The policy analyses of the Advisory Committee and the OIG share at least one common conclusion: that additional baseline data from children's Head Start records, parent interviews, and staff interviews are needed to increase understanding of the health problems and service needs of Head Start children and their families.

The descriptive findings presented in this report are one step in a long-term research strategy to meet these program needs. They also provide data critical for implementing many of the Advisory Committee's recommendations. This study goes beyond the usual compilation of Head Start child health records and standard data from the Head Start Program Information Report (PIR). It includes interviews with Head Start parents about how the program helps them obtain health services for their families, and with Head Start staff about the operation of the Health Component. The study results are based upon reports from a nationally representative sample of 1,189 families with 4-year-old children enrolled in 40 Head

Start programs spread across the nation. This broad description of the Health Component is an important element of the Head Start Bureau's database on programs and children.

1.1 Research Questions

The purpose of this study is to describe the Head Start Health Component across the four health domains: medical, dental, nutrition, and mental health. The program elements described include:

- Head Start staffing patterns and prior and ongoing staff training and experience related to the Health Component;
- Utilization of community resources in the provision of health services;
- Barriers to the provision of health services for Head Start families and programs;
- Current preventive health efforts provided for children and parents; and
- Current screening, examination, referral, treatment, and follow-up procedures employed in each health domain.

Based on these elements, a set of research questions was adapted from the Request for Proposal issued by ACYF for the study; these are shown in Exhibit 1-1.

Exhibit 1-1 Research Questions for the Descriptive Study of the Head Start Health Component

- What are the current procedures used by Head Start grantees to provide or obtain health screenings, examinations, immunizations, referrals and treatment services for enrolled children across the four health domains? How are these health services documented?

- What are the major health problems and risk factors present within the four health domains for children enrolling in Head Start? What are the major perceived health problems and perceived risk factors present within the four health domains for children and families enrolling in Head Start? How does the range and severity of health problems and service needs differ across Head Start programs and populations?

- How promptly are health screenings, examinations, immunization records (status and updates), referrals and treatment provided across the four health domains? What is the range of treatments which are indicated and provided? What follow-up mechanisms exist to document that referrals result in the provision of identified health services (including immunizations)?

- What are the Health Component staffing patterns? What are the staff credentials and training for each position. What are the institutional mechanisms (e.g., community clinics vs. individual professionals) for the provision of health services across the four health domains? What are the health service delivery models?

- What community resources have Head Start programs utilized to meet the health needs of children and their families across the four health domains? Do these patterns vary as a function of State Medicaid or Public Health guidelines?

- What amount of Head Start program funds are used to pay for health services?

- What barriers (e.g., transportation, limited availability of accessible health providers) do families and programs face in attempting to access community and State health services? Are there specific cultural factors (e.g., language) within the four health domains that serve as barriers to health care utilization?

- What health education efforts are directed towards children and parents?

1.2 Study Overview

The ACYF contracted with The CDM Group, Inc. (CDM) and its subcontractor Abt Associates, Inc. (Abt) to undertake this two-phase study. During **Phase I**, the research team designed the study, convened a Technical Advisory Panel, developed the necessary data collection instruments and plans, devised a study sample selection plan, and completed an Office of Management and Budget (OMB) clearance package. **Phase II** consisted of a pilot test, data collection, coding of the qualitative data, data analysis, and report preparation. The timeframe for data collection was April through June, 1994, assuring that all data would be collected before the children left Head Start to enter kindergarten.

The study design called for a sample of 40 Head Start programs. For each selected program, two centers were to be randomly chosen as target sites, for an expected total of 80 Head Start centers.[1] The goal of the research team was to interview program and center staff associated with the operation of the Health Component. At each center, an additional goal was to interview the parents of 15 randomly selected 4-year-old children and to review the Head Start health records for these children.

The research staff obtained information from nine primary data sources: Parents, Head Start child health records, meal observations at Head Start centers, Center Directors (or Lead Teachers), Health Coordinators, Mental Health Coordinators, Parent Involvement Coordinators, Nutrition Coordinators, and Budget Managers. The study was designed to take advantage of multiple sources of information regarding the health status of the children. In this way, the Head Start health records could be supplemented by parents' reports on the same information. Therefore, the data contained in this report can be compared with data

[1] In practice, one of the programs selected was entirely home-based and one had only a single center. Other selected centers were too small to support the intended sample, so additional centers were selected for three programs. A final set of 81 centers participated in the study (see Chapter 3: Methodology).

from the PIR, and do not simply replicate the findings of the 1993 OIG study, which was based entirely on a review of Head Start health records.

The research team convened a Technical Advisory Panel consisting of five consultants across the four health domains, four representatives from relevant Federal agencies, staff from local Head Start centers, and a Head Start parent. During Phase I, the panel provided feedback on the sampling plan, the data collection instruments, and the data collection procedures. During Phase II, the panel reviewed the initial findings and made suggestions regarding the content and format of the final report.

1.3 Organization of the Report

This report is organized into four volumes. Volume I contains the Executive Summary and a longer summary of the study findings from Volume II. Volume II is the heart of the report and provides an overview of the study, a discussion of the historical context for the Head Start Health Component and a detailed outline of the study methodology, including sampling and data collection methods. Volume II also includes eight chapters related to the study findings, along with the Executive Summary. The findings cover program-level data (e.g., program staffing and procedures) as well as child-level information (e.g., weighted and unweighted data on immunizations, health conditions, and health screenings, examinations, and treatments). The chapter structures of Volumes I and II are the same, facilitating the reader's ability to move easily to Volume II from Volume I when more detailed or technical information is desired.

Volume III presents a summary of the qualitative data not included in Volume II. The qualitative data include follow-up interviews with the research associates who supervised the individual site visits and the detailed information that was summarized in Volumes I and II. It also includes several categories of responses from Head Start staff and parents to open-ended

questions that are not summarized in the other volumes. Volume IV is the Appendices and contains the consent form, a summary of the relationship between the research questions and the data collection instruments, the data collection instruments, and an expanded literature review.

2.0 HISTORICAL CONTEXT OF THE HEALTH COMPONENT

For three decades, research on the Head Start program has typically been devoted to the impact of the program on children, families, and communities. Further, there has often been an emphasis on the educational aspects of the program, and rarely have other aspects, including the Health Component, been the focus of a major study of Head Start. The current study is intended to provide descriptive information regarding 1) the characteristics of staff organization and procedures employed by Head Start programs to assure that appropriate health screenings, examinations, and treatments for Head Start children are completed; 2) assessments of perceived problems and barriers to assuring quality health care for Head Start children and families; 3) preventive health activities (health education and immunization) provided by the Head Start program; and 4) reported health conditions in the present population of Head Start children across medical, dental, mental health, and nutritional domains.

These areas have been important concerns for Head Start since the program's inception in 1965. An intent to enhance social competence and to foster constructive opportunities for society to work together with low-income families in solving their problems was among the original objectives for Head Start. In the *Recommendations for a Head Start Program,* dated February 19, 1965, a panel of experts chaired by Dr. Robert Cooke of The Johns Hopkins University specified the basic elements of the future Head Start program. Those elements included an extraordinary emphasis on health assessments and health education:

> It is clear that successful programs of this type must be **comprehensive**, involving activities generally associated with the fields of **health, social services, and education** ... The objectives of a comprehensive program should include ... improving the child's physical health and physical abilities... tailored to the needs of the individual community and the individual child.

The Panel went on to specify in substantial detail the health-related evaluations and programs that should be integral to the Head Start program:

> Evaluation of the child should include a medical assessment (pediatric and neurological physical measurements, assessment of nutrition, vision, hearing and speech, and selected tests for TB, anemia and kidney disease), dental examination, and screening for special problems and special strengths in social and emotional development.
>
> Remedial and developmental health programs should be designed to
>
> 1. include immunizations for polio, diphtheria, tetanus, measles, and smallpox;
>
> 2. correct disorders through the use of existing health facilities in the medical, psychiatric, psychological, and dental fields;
>
> 3. assist the provision of required appliances such as eyeglasses and hearing aids;
>
> 4. establish continuity of health services to meet the child's needs;
>
> 5. develop family awareness of community health resources and the need for their use;
>
> 6. establish sound nutritional practices by ... educating families in the selection and preparation of foods in the home."

The overall goal of Head Start has always been to promote social competence among participating children (Zigler, et al., 1994), a comprehensive construct that includes, among other components, the concern that optimal health is an important factor related to successful social functioning. Children's health has been a focus of the program from its inception, and remains highly relevant more than 30 years later.

2.1 Functions and Organization of the Head Start Health Component

The Head Start Bureau established Program Performance Standards for each of the major program components (Education, Parent Involvement, Social Services, and Health) in 1975, and for the disabilities areas in 1993.[1] Grantees are required to comply with the Standards, which are accompanied by non-mandated guidance that elaborates on their intent and provides information on how they might be carried out. For the Health Component, the overall requirements are to:

- Provide a comprehensive program of health services to assist each child in attaining maximum physical, emotional, cognitive, and social development;
- Promote preventive health services and early intervention; and
- Provide families with the skills, insights, and linkages needed to obtain ongoing health care so that children will continue to receive comprehensive health care after they leave the Head Start program.

As set forth in the Standards, the Health Component emphasizes the importance of health education and the early identification and treatment of health problems. Because many low-income children have limited access to health care, Head Start programs are required to ensure that each child receives a comprehensive health care program across the health domains: medical, dental, mental health, and nutrition (see Exhibit 2-1). The Program Performance Standards for the Health Component are both comprehensive and operationally specific.

[1] Revisions of the Head Start Program Performance Standards have recently been completed.

Exhibit 2-1 Head Start Program Performance Standards: Health Care Services Provided to Children Under the Health Component

Medical Services

- Medical screenings and examinations;
- Vision and hearing tests;
- Identification of disabling conditions;
- Immunizations; and
- Follow-up referral or care for problems identified through this process.

Dental Services

- Dental screenings and examinations; and
- Follow-up referral or care for problems identified through this process.

Nutrition Services

- Children in part-day programs receive at least one hot meal and one snack per day to meet at least one third of a child's daily nutrition needs; children in full-day programs receive between one half and two thirds of their daily nutritional needs;
- A trained nutritionist provides information on nutrition and meal planning to parents; and
- Head Start nutrition services are closely coordinated with the Food and Consumer Service of the U.S. Department of Agriculture.

Mental Health Services

- Mental health training is provided for staff and parents to make them aware of the need for early attention to the special mental and emotional problems of children;
- Services are planned and directed by a Mental Health Coordinator with the assistance of an outside mental health professional; and
- Staff members arrange for individual or group assessments and subsequent services, as needed, for individual children.

The Program Performance Standards address the following issues:

- The creation of a Health Services Advisory Committee (HSAC) to advise in the planning, operation and evaluation of the health services program, consisting of "Head Start parents, health services providers in the community, and other specialists in various health disciplines";

- The elements of required medical and dental histories, screenings (growth assessments; vision and hearing tests; iron deficiency anemia determinations; urinalysis; and additional tests based on existing family and/or community health problems), and examinations;

- The elements of treatment and follow-up services, including procedures for referral;

- Age-appropriate immunization standards for children prior to entry into Head Start and upon leaving the program for kindergarten;

- The elements of medical and dental records as well as standards for record maintenance;

- Plans for medical and dental emergencies;

- The elements of a nutrition program designed to provide at least one third of the daily nutrition requirements for a child and to provide required nutrition counseling and education to families;

- The elements of mental health services, including consultation, training of staff and parents, observations of children, developmental screenings and assessments, and treatment or referrals for identified problems; and

- The elements of a required program of health education for program staff, parents, and children.

Health Component activities involve virtually all of the Head Start program staff at some point during the program year. The Health Component is managed by a **Health Coordinator** who is responsible for the organization and administration of health services, including medical, dental, mental health and nutrition. The Health Coordinator also supervises health workers and activities; is responsible for training all staff in health issues; and must develop and administer a management system for the local Health Component. In programs with many Head Start centers, the Health Coordinator may have one or more assistants

responsible for day-to-day health activities in subgroups of the program's centers. For most grantees, however, a single Health Coordinator is responsible for the entire health program.

The Health Coordinator is assisted by, at a minimum, 1) a full-time or regularly scheduled qualified **nutritionist** or **dietitian** to oversee menu planning, food purchasing, food preparation, sanitation, personal hygiene, activities and staff training; 2) a **mental health professional** (child psychiatrist, licensed psychologist, or psychiatric social worker) who is available on at least a consultation basis to assist in planning mental health activities; train Head Start staff; examine and observe children and consult with teachers and other staff; provide appropriate information to individual and groups of parents; and oversee appropriate referrals for diagnostic examinations as needed; and 3) a **Disabilities (or Handicapped Services) Coordinator** responsible for recruitment, enrollment, and arranging for the delivery of services for children with special needs. Other staff that periodically participate in the Health Component activities include the Social Services Coordinator, the Education Coordinator, Center Directors, and Classroom Teachers and Aides. These activities include assisting in the scheduling and completion of health screenings, conducting classroom observations of child behavior, overseeing children's meals and hygiene, and consulting with parents.

The health section of the Program Performance Standards requires that Head Start programs be responsive to community health needs that affect the children they serve. As part of Head Start's efforts to help families obtain the health services indicated by screening efforts, programs are required to explore and use all available community resources—including health departments, school health programs, clinics, private practitioners, prepaid medical groups, armed forces medical services, hospitals, community health centers, dental service corporations, voluntary agencies, public assistance programs, the Medicaid/EPSDT (Early and Periodic Screening, Diagnostic, and Treatment) program, and other insurance programs—to the maximum extent possible. Programs also are required to inform parents about available health resources and to assist parents in gaining access to care.

Sometimes, local providers are willing to volunteer their services to a center or program as "in-kind" contributions of goods and services.[2] In coordinating its work with families, Head Start has a critical role as a service broker across a range of different community providers (Pizzo, 1993). After all other funding sources have been explored and exhausted, the Head Start program becomes the "dollar of last resort," and will help parents pay for the health services needed by their children.

The effective transfer of health care information from the Health Coordinator or a member of the Health Component staff to the family member responsible for connecting the child to the health care system is an essential part of Head Start efforts. The Health Coordinator serves as a broker between Head Start parents and community health centers, clinics, and private providers. By identifying providers, furnishing information and assistance, and securing necessary funding, Head Start staff provide support and encouragement for parents to negotiate the health care system themselves. This means enabling parents to make and keep appointments with appropriate service providers in the local community and to obtain follow-up treatment for conditions identified through screenings and examinations. Head Start's objective is for parents to be in a position to assume sole responsibility for these tasks after leaving the program.

In general, the work of Head Start in this area has been identified as a model for other child-service programs (Gomby, Larner, Stevenson, Lewit, and Behrman, 1995). The program has long recognized that the health status of children and their educational development are inextricably linked (Novello, DeGraw, and Kleinman, 1992; Zigler, et al., 1994). Efforts to create links between child care providers and health care providers are a crucial component of the Head Start Health Component. In order to make use of available community resources to benefit Head Start children and families, each program is required to establish a working relationship with organizations in the community it serves. The issue of

[2] Head Start programs are required to generate 20% of the total cost of the program through "in-kind" support from their community to support program activities.

community linkages was recently addressed within the major policy recommendations of the Advisory Committee on Head Start Quality and Expansion.

> We must encourage Head Start to forge partnerships with key community and state institutions and programs in early childhood, family support, health, education, and mental health, as we must ensure that these partnerships are constantly renewed and recrafted to fit changes in families, communities, and state and national policies (p. viii; 1993).

As noted by the Advisory Committee, the health of low-income children and families has been increasingly threatened in recent years by a variety of barriers and additional health risks and conditions.

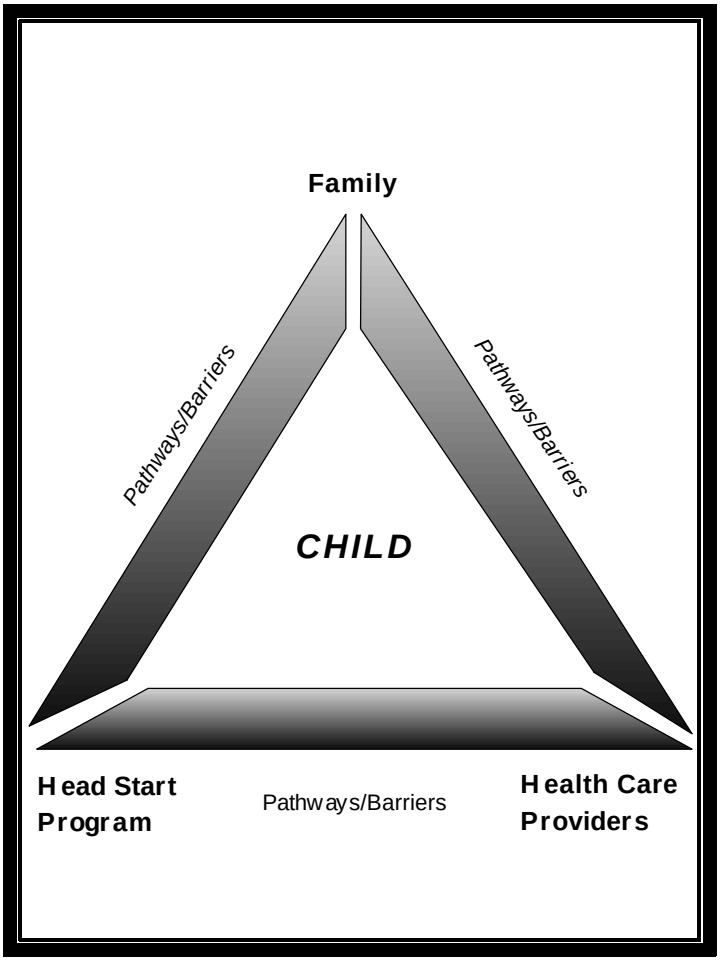
2.2 Barriers to Health Care for Head Start Children and Families

Parents of Head Start children face a number of significant barriers to obtaining health care: financial, geographic, and institutional barriers inherent in the community, as well as personal and cultural barriers. As illustrated in Exhibit 2-2, the health and health care for a Head Start child is influenced by three major resources (the family, available health care providers, and the Head Start program) and by the pathways/barriers that affect communication among those support elements. The Head Start program is designed to improve the pathways between families and health care providers, while also providing families with the knowledge and skills needed to minimize the influence of barriers to quality health care for the child.

Financial Barriers. The costs of preventive health care, diagnosis and treatment are frequently cited as barriers to adequate health services for children in low-income families. Without some form of health insurance, the financial burden of health care can be overwhelming. Most children enrolled in Head Start are eligible for Medicaid and can receive EPSDT services. As defined under the Omnibus Budget Reconciliation Act of 1989 (Public

Law 101-239), States must make EPSDT services available for Medicaid-eligible individuals under the age of 21. These services include comprehensive health and developmental assessments, laboratory tests, immunizations, and health education. In addition, visual, dental, and hearing services must be provided. All services must be provided at intervals that meet accepted medical and dental standards or as necessary to diagnose physical or mental illnesses. Under EPSDT, States provide the medical screenings necessary for assessing the development of the child, and further diagnosis and treatment for any condition discovered during a screening. Under Public Law 101-239, States were required to provide treatment for diagnosed conditions only if such treatment was covered under the State Medicaid plan. However, the Omnibus Budget Reconciliation Act of 1989 changed this provision. States are now required to provide the Medicaid services needed to treat a condition identified during an EPSDT screen, whether or not the services are included in the State's Medicaid plan. Practitioners or providers are reimbursed directly through Medicaid (ACF, 1991). Follow-up treatment for health conditions identified through Medicaid/EPSDT screenings must be provided by the States. Despite this available insurance program, low-income families do not always enroll their children in Medicaid. Head Start programs review the Medicaid status of children when they enroll in Head Start and provide assistance to families, as needed, to assure that eligible children are covered by the Medicaid/EPSDT program.

Exhibit 2-2 Forces Impacting the Health/Health Care of a Head Start Child



Approximately two thirds of Head Start children receive Medicaid/EPSDT services, which can be obtained from qualified, participating Medicaid providers. Qualifications for Medicaid/EPSDT vary from State to State. Unfortunately, not all health care providers are accessible through Medicaid. In 1989, only 77% of all private pediatricians accepted Medicaid beneficiaries, and 39.4% placed strict limits on the number of Medicaid-insured children they would take into their practices (Yudkowsky, Cartland & Flint, 1990). Private practitioners may be unwilling to accept Medicaid patients for many reasons: low fees; the

administrative and billing complexities of the Medicaid system; and problems, real or perceived, with the Medicaid recipients themselves (Hill, 1992). Notably, while Medicaid/EPSDT does cover periodic dental examinations, the costs of the most common oral health treatments (removal of decay and caries restoration) are not covered. In addition, non-Medicaid programs may present additional barriers by setting dollar limits on coverage, adding high deductibles, and not covering certain services. Thus, the costs of medical care can be a significant barrier to obtaining appropriate health services for children in low-income families.

Geographic Barriers. Studies have shown a disproportionate distribution of health providers throughout the Nation: metropolitan areas and high-income areas have a high number of providers, while rural areas face a scarcity of providers and long distances between those that are available (Klerman, 1992). Besides affecting access to routine care, the distance between providers and children in rural or low-income areas can cause delays in securing medical services. Children living in rural and low-income areas often require transportation to reach health care providers, posing problems for families without cars or access to public transportation. In at least one study, rural location was a stronger predictor of poor dental health than ethnicity or cultural factors (Barnes et al., 1992).

Institutional Barriers. Institutional barriers are defined as the policies, practices, and attitudes of service delivery organizations that block access to care (Klerman, 1992). Health care provider policies, for example, may be based on the financial status of the patient, and providers may refuse to accept Medicaid or to adopt a sliding fee schedule.

Non-financial policies also limit access to preferred provider organizations and health maintenance organizations (HMOs). These programs can limit or deny pediatrician referrals to subspecialists (Cartland & Yudkowsky, 1992), and they cover fewer services, such as prescriptions or mental health services for children with chronic illnesses, than are available under traditional health care plans (Horwitz & Stein, 1990). Some programs have systemic requirements, such as completing forms, keeping scheduled appointments, and frequent

recertifications, which may make it difficult for individuals to gain access to or to stay enrolled in these programs (Zigler et al., 1994).

The manner in which health care organizations or practices conduct business may affect parental interaction with the health care system. Office scheduling procedures often make it difficult for parents to set up timely appointments, especially at times convenient for working parents or parents who must arrange child care for other children. Long lags may occur between the day an appointment is made and the day a child is seen. Providers do not always accommodate parents with poor reading skills or those who do not speak or read English.

Cultural and Personal Barriers. Cultural factors may impede access to health care for Head Start children by interacting with socioeconomic and other variables, although the evidence for this is mixed. Cultural barriers, such as the lack of Hispanic or Spanish-speaking staff or encounters with disrespectful staff, were noted among Hispanics in reviews by Hayes-Bautista (1979, 1992). Estrada, Trevino, and Ray (1990), however, found that one third of a sample of Mexican-Americans encountered barriers that actually prevented them from obtaining care, although very few respondents in this study actually cited cultural and linguistic barriers as constituting the problem (Estrada et al., 1990).

Parental beliefs about and attitudes toward health care and disease prevention directly affect access to care for their children. Several studies have found more healthful lifestyles among Hispanic women compared with their African-American counterparts. These differences have been explained by personal factors, including knowledge, attitudes, and beliefs about health promotion (Sanders-Phillips, 1990, Hayes-Bautista, 1992). Both groups reported that mothers were the primary decision makers about health matters in their families (Sanders-Phillips, 1990).

2.3 Current Health Context for the Head Start Program

The current context of health risks that are encountered by children in low-income families is an important factor in an examination of the patterns of delivery and use of health care services for Head Start children. Overall, the health of the Nation's children has improved in recent decades. Promising statistics include a reduction in infant and child mortality rates, a reduced incidence of preventable childhood diseases through effective immunization programs, and reductions in the prevalence of dental caries through fluoridation and improved preventive dental care. Additionally, information about the long-term impact of tobacco products, alcohol and illicit drugs, and poor dietary habits are increasingly being promulgated through health education programs.

However, in the three decades since the inception of Head Start, many elements of poverty have been altered by sociological forces, and these changes often have had negative implications for the physical and mental health of children in low-income families (several studies examining these implications are reviewed in the following sections). In turn, impaired health can be expected to have adverse effects on school achievement and on other indices of social competence (Zigler, et al., 1994).

Medical Health. Attention to chronic health conditions related to the physical and social environment has recently increased. These conditions include otitis media, chronic respiratory disease, asthma, tuberculosis, lead poisoning, infection with human immunodeficiency virus (HIV) or other sexually transmitted diseases before birth, and conditions related to maternal behavior during pregnancy. Other health conditions, such as physical injury and behavioral/emotional problems, may result from stress caused by exposure to violence or other elements of the environment common to low-income families.

Fluid accumulation in the middle ear *(otitis media*) is among the most common medical problems of early childhood. Hearing loss associated with this condition has been

reported to have an impact on language acquisition (Teele, Klein, Rosner, et al., 1984) and retrospective studies have documented increased prevalence of early middle ear disease among school-aged children with learning disabilities (Bennett, Ruuska & Sherman, 1980).

Over the past decade, emergency-room visits and hospitalizations for acute *asthma* attacks among children has increased approximately 30 percent throughout the Nation (O'Connor, 1996), despite the availability of effective medications and management procedures. Mortality related to asthma and chronic respiratory conditions has nearly doubled for African-American children since 1990 (MMWR, May 1996). This trend is concentrated in urban communities, where it is associated with environmental triggers such as cockroaches, mold and mildew, dust, and cigarette smoke. In many cities, asthma is the leading cause of school absenteeism (Weiss, 1995), thus affecting school performance and educational achievement.

In the early 1990's, the number of individuals afflicted with *tuberculosis* in the United States increased dramatically (Agrons, Markowitz, & Kramer, 1993). While the incidence of tuberculosis has stabilized, the disease remains concentrated in the growing population of socioeconomically disadvantaged persons, and tuberculosis (TB) screening is recommended for children who are in contact with adults at risk for the infection (Levin, Gums & Grauer, 1993).

Only recently has it been understood that *lead exposure* levels previously thought to be harmless have pervasive behavioral effects. In 1990, an estimated 3 million children had blood lead levels that could adversely affect development and cognitive ability (Binder & Matte, 1993) and that could cause preventable learning disorders (Feldman & White, 1992). Lead concentrations are highest among children living in low-income, inner-city areas (Guthrie & McNulty, 1993).

It is now widely accepted that a child's health and development can be seriously affected by a *mother's behavior while pregnant*. Infection with HIV, and exposure to illegal and legal drugs, tobacco and alcohol before birth are associated with fetal and infant mortality, low birth weight, and premature birth (Zigler et al., 1994; General Accounting Office (GAO), 1990; Zuckerman et al., 1989). For example, high levels of alcohol consumption during pregnancy are associated with spontaneous abortion, preterm labor, intrauterine growth retardation, congenital abnormalities, fetal alcohol syndrome, and decreased mental and motor performance.

As infant mortality has steadily declined, many more *low-birthweight and other high-risk infants* have survived. Babies with low and very low birthweights have 7 to 10 times the risk of severe developmental problems (such as cerebral palsy, blindness, deafness, and retardation) as normal birthweight infants. They also are two to three times more likely to have chronic health problems and poor school performance (Novello, DeGraw, and Kleinman, 1992). Again, children from low-income families are far more likely to be born with low or very low birthweights.

Injuries resulting from accidents, many of them preventable, remain the leading cause of death in childhood. For preschool children, injuries claim more lives than all other causes combined. Injuries to young children can also cause a heavy toll due to permanent disabilities, many resulting in subsequent learning problems and difficulties in school. Increased parental awareness of the danger inherent in certain environments and activities and the adoption of proven measures to prevent and minimize injuries can be an important preventive health measure.

Each of the above conditions presents challenges for Head Start providers. Many are preventable, and their incidence may be reduced by effective health education provided to parents and children. Except in severe cases or acute stages, the behavioral manifestations of chronic health conditions such as asthma, lead poisoning, HIV infection, and fetal drug and

alcohol syndromes are subtle but often treatable. These behavioral manifestations include hyperactivity, attention deficit disorders, and aggressive behavior, which can be particularly disruptive to the individual child's learning and interfere with the learning experiences of classmates as well. It is increasingly important that Head Start staff, including those in classrooms, be aware of the observable symptoms of such conditions so that effective services can be recommended to parents in a timely fashion.

Dental Health. Studies of children indicate that dental disorders are higher among low-income children than other children. In 1984, the largest study of Head Start children yet conducted found that one fourth of the children were urgently in need of dental care (Fosburg, 1984). A similarly high prevalence of dental caries in Head Start children has been reported in several recent studies (Barnes, Parker, Lyon, Drum & Coleman, 1992; Jones, Schlife & Phipps, 1992; Kaste, Marianos, Chang & Phipps, 1992; Katz, Ripa & Petersen, 1992), suggesting that significant numbers of Head Start children require dental treatment when they enter the program.

Nutrition. Inadequate nutrition during childhood has been found to have lifelong effects on the health and functioning of the individual. Nutrition problems (typically iron deficiency anemia) have long been associated with poverty. More recently, the incidence of childhood obesity related to poor dietary selection and inadequate exercise has reportedly increased among children from low-income families (Yip, Scanlon & Trowbridge, 1993).

Mental Health. The number of children receiving mental health services in a given year has increased significantly since 1980. Children in low-income families are increasingly exposed to homelessness, the incarceration of family members, and the death of relatives or close acquaintances due to causes such as acquired immunodeficiency syndrome (AIDS), substance abuse, and violence in their neighborhoods and homes. In addition, reports of child abuse and neglect across all social strata have continued to increase (Gelles, 1995). Faced with such conditions and incidents, national concern for the mental health of children has

increased. Left untreated, mental and emotional disorders can lead to impaired social functioning, adaptation, and productivity. Poverty places children at greater risk for "a host of biologic insults that threaten the integrity of the central nervous system," and epidemiologic studies have shown an association between organic brain dysfunction and psychiatric disorder in children (Hertzig, 1992).

2.4 Head Start Program Growth and Quality

In recent years, many Head Start programs have been granted increased funding. Between 1990 and 1995, the Head Start appropriation has increased from $1.5 billion to $3.5 billion (Head Start Fact Sheet, February, 1995). This funding is intended to both increase the number of children served and to improve the quality of Head Start programs. While increased funding is undoubtedly welcomed at the local level, the additional mandates to serve more children and to improve the quality of the services provided also adds complexity to the mission of serving low-income families.

Thus, the context of child health conditions faced by Head Start program staff has become increasingly complex during recent years. Its effects may often be first recognized and identified by Head Start health screenings and/or Head Start classroom observations. Given the new program mandates, the importance of Head Start's role in (1) identifying the often subtle early-warning signals of health conditions; (2) facilitating diagnoses and treatment of those conditions; and (3) providing health education that can prevent or limit the effects of such conditions is significantly increased. This study is an investigation into how local programs make the effort to remain true to the original vision of the founders of Head Start regarding the role of good health in the growth and development of children.

3.0 METHODOLOGY

3.1 Overview

Chapter 3 describes the data collection methodology used in this study, with a primary focus on the sampling plan, the weighting of the study sample to provide national Head Start estimates, the development of the data collection instruments, and the data collection procedures used with parents and staff at the study sites. Additional discussion addresses limitations of the study that impact on the interpretation of the findings.

3.2 Description of Head Start Universe

In order to collect data for children completing their Head Start experience, only 4-year-old children were targeted in the study. Therefore, the universe of Head Start programs included only programs operating during the 1992-93 school year that also enrolled 4-year-old children during that year. Migrant programs were excluded because they were participating in a separate study in which the Health Component was one of the primary interests. Data on the relevant programs were obtained from the 1992-93 Program Information Report (PIR) database. The PIR is a self-completed report containing summary descriptive information submitted by each program at the conclusion of the program year. For a study conducted during the 1993-94 academic year, the 1992-93 PIR was the most recent and complete source of information on all the Head Start programs and, therefore, was used to construct the sampling frame. However, the 1993-94 PIR data accurately describe the universe of Head Start programs at the time of data collection for this study (April-June, 1994) and provide descriptive data for the participating programs during the time of the study. Exhibit 3-1 contains a comparison of information from the 1992-93 PIR, the 1993-94 PIR, and the 1993-94 PIR data specific to the 40 programs that participated in this study.

Exhibit 3-1 Summary of Head Start Program Characteristics From the PIR* Data

			Sample Programs**	
	1992-93 PIR	1993-94 PIR	1992-93 PIR	1993-94 PIR
Number of Programs***	1796	1834	40	40
Total Number of Children	666,492	732,218	39,118	42,999
Proportion of Children	**Percent %**	**Percent**	**Percent**	**Percent**
4-Year Old Children	65.9	64.5	68.5	65.9
Children Enrolled in Second Year of Head Start	19.5	19.2	17.8	18.4
Home-based Children	7.4	6.8	9.2	9.3
Families Enrolled in Medicaid/EPSDT****	67.3	69.4	66.0	70.4
Racial Distribution				
American Indian	3.8	3.7	10.0	9.8
Asian/Pacific Islander	3.1	3.2	2.7	2.4
Black	37.5	36.9	39.2	38.2
Hispanic	21.3	21.7	22.0	23.4
White	34.3	34.5	26.1	26.1
Sponsoring Agency Type				
Community Action Agency	35.8	34.7	45.0	45.0
School System	20.4	20.2	12.5	12.5
Private/Non-Profit	33.2	33.4	32.5	32.5
Government Agency	4.7	5.3	7.5	7.5
American Indian Tribe	5.9	6.4	2.5	2.5

*PIR - Head Start Program Information Report.
**Data for sample programs are based on all enrolled children, not just the respondents to this study.
***Excluding migrant programs and programs without 4-year-old children.
****EPSDT - Early and Periodic Screening, Diagnostic, and Treatment Program.

Exhibit 3-1 also presents data from the 1992-93 and the 1993-94 PIRs showing that overall, the data are comparable across the two years. This is important because it indicates

that the use of the earlier dataset for sampling purposes is valid, and should produce a sample that is representative of the national Head Start program during the study period. Across the two datasets, the major differences between the two years of PIR data are the total number of programs and children enrolled in Head Start. In 1992-93, total enrollment in the 1,796 programs of interest was 666,492 children. The following year, over 732,000 children were enrolled in a total of 1,834 programs serving 4-year-old children. In 1992-93, approximately two thirds of all children enrolled in Head Start were 4-year-olds. The percentage of 4-year-old children out of the total enrollment in 1993-94 declined slightly, from 65.9% to 64.5%. Although only the 4-year-old children were considered for inclusion in this study, the nature of the PIR data do not allow descriptive statistics (e.g., racial or ethnic group) on sub-groups of the Head Start population. Rather, the PIR data reflect aggregate information across all enrolled children. Other descriptive characteristics of the Head Start universe changed very little across the 2 years (see Exhibit 3-1).

The selected sample of programs closely matches characteristics of the Head Start universe as represented by the PIR with some minor exceptions. For example, because the single American Indian Tribal program selected was substantially larger than the average Head Start program, that ethnic group is over-represented in the raw totals. In turn, the White population is somewhat under-represented. These differences were corrected through selection of only 30 children from each program (thereby reducing the sample of children from any single program to approximately 2.5% of the total sample) and by statistically weighting the selected sample to a nationally representative sample during data analysis. In terms of sponsoring agencies, our sample somewhat under-represented programs sponsored by school systems and American Indian Tribes, while over-representing those sponsored by Community Action Agencies. For this study, programs were selected using the Probability Proportional to Size (PPS) sampling strategy (see Section 3.3). Because programs sponsored by school systems and American Indian Tribes are smaller, and Community Action Agency programs have larger enrollments than the average Head Start program, the impact on the distribution of agency type was expected.

3.3 The Sampling Plan

The primary objective of the sample design was to provide a national probability sample of children enrolled in Head Start. This was accomplished through a multi-stage sampling strategy. The first-stage sample consisted of 40 Head Start programs selected from the universe of programs identified in the 1992-93 PIR database. The second stage of sampling resulted in 80 Head Start centers (two centers per program). The final stage of sampling selected 15 children per center, to yield 1,200 interviews with parents for a nationally representative sample of Head Start families. The details of each stage of sampling are described below. A discussion of the estimated precision of the resulting data then follows.

3.3.1 First Stage Sample: Selection of Programs

The first-stage sample generated the 40 Head Start programs. The 1992-93 PIR data file contains information for all programs enrolling 4-year-old children in the 50 States, Puerto Rico, and the Territories of the United States. Except for Migrant Head Start programs, all such programs were included in the study sampling frame. The available programs were stratified on the basis of three variables—Geographic Region (Northeast, Midwest, South, and West), Urbanicity (whether or not the Head Start program Zip Code was located inside an Urbanized Area),[1] and the percentage of Head Start children who are minorities (greater than or equal to 50% minority enrollment versus less than 50% minority enrollment). The combination of the three stratification variables formed 16 strata (4 x 2 x 2) as shown in Exhibit 3-2.

[1]During the process of selecting centers for the study, it became apparent that Head Start programs often manage centers located at substantial distances from the main program address. In such cases, the program address is often in an Urbanized Area while most or all of the program centers are located in surrounding rural areas. Occasionally, the reverse was true as well.

Exhibit 3-2 Distributions of All Head Start Programs, Enrollment of 4-Year-Olds, and Study Programs Across 16 Sampling Strata

	Minority Enrollment Under 50%			
	Northeast	**Midwest**	**South**	**West**
Urban	73* 15,336** 0***	106 22,051 2	30 7,072 1	47 11,651 1
Rural	87 11,348 1	187 35,861 4	145 28,327 3	66 7,950 0

	Minority Enrollment 50% or Higher			
	Northeast	**Midwest**	**South**	**West**
Urban	160 37,736 5	143 44,161 4	224 88,267 9	155 58,075 5
Rural	8 961 0	36 3,377 0	175 40,289 3	114 16,234 2

Note: Key to data within each cell:

*Total number of Head Start programs (based on 1992-93 PIR)
**Total enrollment of 4-year-olds in these programs (based on 1992-93 PIR)
***Number of programs randomly selected for The Descriptive Study of the Head Start Health Component

The sample of programs was allocated to the 16 strata in proportion to the enrollment of 4-year-olds contained in the 1992-93 PIR file for each stratum. This meant that if a stratum contained 10% of the total enrollment of 4-year-olds, the Head Start program sample size allocated to that stratum was 4 (of 40 or 10%). This type of allocation made it possible to design a sample that provided a self-weighting national probability sample of Head Start children. Exhibit 3-2 shows the total number of Head Start programs for each stratum, the total number of 4-year-olds enrolled, and the number of programs drawn from the stratum. As shown, several cells are not represented in the selected sample due to their relative rarity. These include urban Northeastern programs and rural Western programs with less than 50% minority enrollment and rural Northeastern and Midwestern programs with greater than 50% minority enrollment.

The 40 programs were selected across the 16 strata using a PPS sampling strategy. The measure of size for a program was the number of enrolled 4-year-olds in that program. PPS sampling gives larger programs a greater chance of being selected. The PPS sample was computer generated, based on a random start and the repeated application of a systematic selection interval equal to the total 4-year-old enrollment of the stratum divided by the desired number of sample programs.

3.3.2 Second Stage Sample: Selection of Centers Within Programs

During the second stage of sampling, 80 Head Start centers were selected. Each of the 40 Head Start programs selected in the initial sampling stage provided a listing of their Head Start centers along with the 4-year-old enrollment for each center. The PPS sampling strategy was again applied. The measure of size for the PPS sample of centers was the 4-year-old enrollment for each center. A PPS sample of two centers was then drawn for each program (except for one program which had only a single, large center). For several programs, where the centers selected had fewer than twenty 4-year-old children enrolled, an additional, backup center was identified. However, it was necessary to employ the backup

center for data collection in only two instances. Therefore, a total of 81 Head Start centers were included in the second stage sample.

3.3.3 Third Stage Sample: Selection of Individual Children

The third stage of sampling involved the actual selection of Head Start children. The target population consisted of 4-year-old children enrolled in Head Start at the beginning of the Head Start program year. Head Start health screenings typically take place prior to or early in the program year; therefore, it was important to sample from a group of children who were participating in the program at the same time, whether or not they remained in the program. Since data collection took place in April, May, and June, near the end of the program year for most programs, some attrition in the available population was expected due to children leaving Head Start. Research staff did attempt to contact the families of these children, but most could not be reached.

Using enrollment lists provided by the centers, the research staff identified a random sample of 15 primary children and 8 alternates. The anticipated sample for each center was expected to be representative of the gender distribution of that center because the PPS strata for children used gender as the stratification variable. Unfortunately, because gender information is not collected by the PIR, gender data were not uniformly provided by, or available from, the participating programs or centers. Therefore, the estimated gender distribution provided by this study has no base for comparison. The data collection effort was directed at completing 15 interviews per center from 80 centers for a total of 1,200 parent interviews. In cases where the family of one of the 15 pre-selected children could not be located or a parent declined to be interviewed, alternates were used. A total of 1,189 parents were actually interviewed. Missing interviews generally were distributed across several centers, with the exception of one rural program where parents and staff experienced problems arranging times and transportation to complete the interviews.

Weights were computed to adjust the response percentages to national estimates. In this approach, a weight equal to the reciprocal of the probability of selection was computed first. This sampling weight was then adjusted for estimated nonresponse within the center (see Volume III, Chapter 4: Research Staff Reports). Reviewing the population totals from the PIR data file (i.e., total and regional enrollment of 4-year-olds and ethnicity proportions), it was determined that the rates required no further adjustment, as they were within acceptable ranges. For a response that is provided in a given way 50% of the time, a random sample of 1,189 interviews would provide a precision level for a 95% confidence interval of plus or minus 2.4 percentage points.

3.3.4 Sample Design

The sampling plan actually involved a three-stage cluster sample design. Given a sample of 40 Head Start programs, a second stage sample of two centers per program, and 15 interviews per center, the design effect equation below can estimate precision levels for estimates resulting from this design:

$$var(P)= [(P*(P-1))/(a*b*c)][1+x*(b-1)][1+y*(c-1)]$$

where

P = the response proportion;

a = the number of programs in the sample;

b = the number of centers sampled within a selected site;

c = the number of completed interviews with parents per center;

and

x = is the typical intra-cluster correlation for centers within programs; and

y = is the typical intra-cluster correlation for Head Start children within centers.

Exhibit 3-3 provides estimated confidence intervals for responses at several percentage levels for the national, regional, and urban and rural estimates using .01 and .02 for the center and family intra-cluster correlations, respectively. For example, if a particular response is

provided by 50% of the national sample, the proportion of the entire Head Start population that would make such a response is estimated at 50%, plus or minus 2.7%. Similarly, for a response made by 70% of the Western region sample, the proportion of the Head Start population in that region that would make such a response is estimated at 70%, plus or minus 11.3%. As shown, precision is quite good for national estimates, particularly for items where a particular response was provided by substantially greater or less than 50% of those surveyed. Also, the sample provides relatively small confidence intervals for the South (where a high percentage of Head Start programs are found) and for urban and rural program estimates. For cells where the population and number of programs sampled are fewer, any estimates are less reliable and, correspondingly, have a larger confidence interval. This is particularly evident for the Northeastern and Western geographic regions.

Exhibit 3-3 Estimated Precision Levels for National, Regional, and Urban-Rural Data

		Regional*				Urbanicity	
	National	**NE**	**MW**	**S**	**W**	**Urban**	**Rural**
Number of Programs	40	6	10	16	8	27	13
Response Percentages							
10	1.0	6.5	3.9	2.4	4.8	1.4	3.0
30	2.3	15.1	9.0	5.7	11.3	3.4	7.0
50	2.7	18.0	10.8	6.7	13.5	4.0	8.3
70	2.3	15.1	9.0	5.7	11.3	3.4	7.0
90	1.0	6.5	3.9	2.4	4.8	1.4	3.0

*Northeast, Midwest, South, and West

Note: Figures within cells represent the estimated confidence interval for data within that cell.

The confidence intervals for children in urban and rural programs are also shown in Exhibit 3-3. As shown, approximately two thirds (27) of the participating Head Start

programs were located in urban locations. Therefore, the precision of estimates for those programs is greater than for rural programs, as illustrated in the Exhibit. Finally, 28 programs were selected that had greater than 50% minority enrollment, and 12 with less than 50% minority enrollment. Although not shown in Exhibit 3-3, confidence intervals for those programs with a high proportion of minorities are almost identical to those for urban programs, and confidence intervals for programs with less than 50% minority enrollment are quite similar to those for children in rural programs.

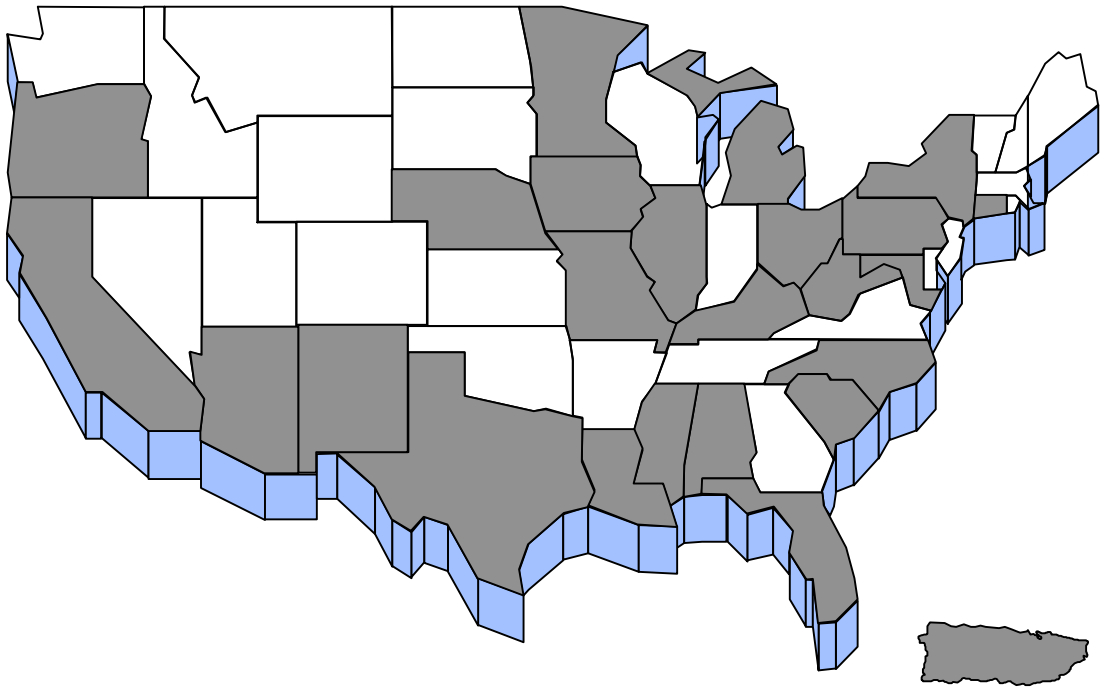
3.4 Description of Study Sample

3.4.1 Head Start Children and Parents

As described, the study sample consisted of 40 Head Start programs. The national distribution of States covered by this sample is shown in Exhibit 3-4. All programs drawn on the first try agreed to participate, making it unnecessary to draw any replacement programs. The total number of centers visited was 81. As noted, one of the programs was entirely home-based and, consequently, had only one center. In two other cases, the random selection resulted in the use of a center that did not have the requisite number of 4-year-old children (15), and an additional center was drawn to complete the sample. As noted in Exhibit 3-2, 27 programs were urban and 13 were rural. The sample included 6 programs from the Northeast, 10 from the Midwest, 16 from the South, and 8 from the West. The minority enrollment was under 50% for 12 programs, and over 50% for 28 programs.

As noted earlier, to demonstrate that the sample is similar to the population, the PIR data for the 40 sample programs are included in Exhibit 3-1 with similar data for the universe of Head Start programs. Summary statistics indicate that the 40 programs represented a full range of sponsoring agency types: Community Action Agencies (45.0%), private/public non-

Exhibit 3-4 States Visited During Data Collection*



*Shaded States contained data collection sites.

profit organizations (32.5%), school systems (12.5%), government agencies (7.5%), and American Indian Tribes (2.5%). The size of these programs ranged from 147 to 4,286 funded children (mean = 960.5), with the range of 4-year-old enrollment ranging from 94 to 3,222 (mean = 708.9). The mean number of classes for each program was 47, with a range of 0 (totally home-based) to 214.

Approximately 78% of the originally selected sample of parents was interviewed. Alternates were employed for approximately 22% of the interviews and record reviews (see Volume III, Chapter 4: Research Staff Reports). Relatively few parents refused participation, with the primary source of attrition being the inability to locate the parents of children who

had left the program. The lack of transportation, illnesses, other commitments, and unexplained missed appointments accounted for the additional use of replacements.

Descriptive statistics for the sample of children represented by the 1,189 parent interviews are found in Exhibits 3-5 and 3-6. Almost 51% of the children whose parents were interviewed were female. The racial background of the children was obtained during the parent interview using the standard U.S. Bureau of the Census classifications. The sample represented the broad ethnic distribution typical of Head Start, including Whites (not of Hispanic origin) (37.5%), Blacks (not of Hispanic origin) (32.8%), Hispanics (18.2%), Asians or Pacific Islanders (1.6%), and American Indians (4.2%). Parents identified 5.7% of the sample of children as being "Other," a category which, based upon staff probes, was used by parents who felt that the standard categories were not applicable because their child was of a multiracial or multiethnic background. This identification factor likely explains the small discrepancies between the distribution of racial groups for the study sample and that seen in the PIR data in Exhibit 3-1. Over 77% of the families reported that the primary language spoken in the home was English, 13% reported another primary language (generally Spanish), and 10% reported that both English and a second language were considered primary languages in their home.

Exhibit 3-5 Demographic Data From the Parent Interviews and Reviews of Child Health Files

Racial Background (Reported by parents)	Unweighted n	Weighted Percent
Total	1,189	100
American Indian	36	4.2
Asian or Pacific Islander	19	1.6
Black (not of Hispanic origin)	399	32.8
Hispanic	222	18.2
White (not of Hispanic origin)	438	37.5
Mixed Race	74	5.7
Missing	1	

Gender (Recorded from child health file)	Unweighted n	Weighted Percent
Female	602	50.9
Male	582	49.1
Missing	5	

Primary Language Spoken at Home* (Reported by parents)	Unweighted n	Weighted Percent
English	1,029	86.9
Spanish	224	18.1
Other	47	4.7

*Some families indicated more than one language.

The average household size for interviewed families was 4.6 individuals (see Exhibit 3-6). Up to seven adults and fifteen children were present in these homes. Of the "other" children in these homes (that is, children other than the Head Start enrolled child), about 37% were younger than the Head Start child.

Exhibit 3-6 Household Descriptions From the Parent Interviews

Household Descriptions	Mean*	Range
Number of Adults	1.88	1 to 7
Number of Children	2.81	1 to 15
Number of Children Younger Than the Study Target Child	0.67	0 to 6

*Weighted data. N=1,189 households.

Significant portions of the child health files are dependent on interviews completed by Head Start staff with a parent or caregiver prior to participation in the Head Start program. A critical factor in comparing parent interview data from this study with corresponding information from the child health files is the relationship of the adult who provided the information for each data source with the target child. This would indicate whether or not the same person provided the information for both the files and the interviews. The most common providers of information for both interviews and health records were mothers (87.0% of parent interviews, 77.7% of the child health files). Other study respondents included fathers, grandmothers, and aunts, but none of these were reported in more than 4.5% of the cases. In reviewing the child health records, 13% of the adult respondents could not be identified. In 79.8% of the cases, the same person was identified as providing information for both sources; and, in 73.6% of cases, mothers completed both the Head Start interview and the parent interview conducted under this study.

3.4.2 Head Start Staff

A total of 195 Head Start staff were interviewed. Since some of these individuals filled multiple roles for the program, they completed a total of 219 staff position interviews. Of those interviewed, 19 completed more than one interview. All Parent Involvement Coordinators (N=42) and Center Directors (N=59) were interviewed for those positions only. In addition, 29 Health Coordinators, 21 Nutrition Coordinators, and 25 Mental Health Coordinators were interviewed just once. A total of 5 individuals were interviewed for three roles (Health Coordinator, Nutrition Coordinator, and Mental Health Coordinator); 6 were interviewed as Nutrition Coordinator and Mental Health Coordinator; 5 were interviewed for both Health Coordinator and Mental Health Coordinator positions; and 3 were interviewed as the Health Coordinator and again as Nutrition Coordinator.

In all, a total of 42 Health Coordinator interviews were completed, along with 39 Nutrition Coordinators, 37 Mental Health Coordinators, 42 Parent Involvement Coordinators, and 59 Center Directors. Some programs were large enough to have more than one individual filling a specific role. In other cases, a staff position was vacant at the time of the data collection. Also, some staff serving as Center Directors were managing several centers, and others were unavailable for interviews. Thus, fewer than 80 Center Director interviews were completed.

3.5 Data Collection Instruments

3.5.1 Data Sources

The research staff developed data collection measures for nine different data sources. These were interviews with the Health Coordinator, Nutrition Coordinator, Mental Health Coordinator, Parent Involvement Coordinator, Center Director/Lead Teachers, and parents as well as child health record reviews, meal observations, and a questionnaire for the Program Budget Manager. Data were collected at either the program or the center level, depending on

the type of information needed and variations in the structure of individual programs. In addition, each program provided documentation concerning the operation of the Health Component.

Data collection instruments for these primary data sources are found in Appendix B of Volume IV. Spanish versions of all of the interview forms were developed for use in programs where parents and/or staff primarily spoke Spanish (see Volume IV, Appendix B). In the few cases where other languages were spoken by the parents, local program staff provided assistance with translation.

3.5.2 Instrument Development

Where appropriate, specific interview questions were made consistent with the PIR, the Head Start Family Information System (HSFIS), and the On-Site Program Review Instrument (OSPRI). The HSFIS, designed to collect data on Head Start families and children at the family level, is used to match Head Start services with individual family needs. The OSPRI is the primary data collection instrument used in conducting Head Start on-site program reviews, with each program being reviewed once every 3 years. The instrument developed for abstracting data from the child health files was based on the information detailed in the 1992 version of the Head Start Child Health Record.

Each staff interview form was developed within a framework that provided a common structure across the different staff interviews based on the following categories:

- Background and responsibilities;
- Staffing and center policies;
- Health problems and risk factors;
- Health histories, screenings, and examinations;
- Treatment services; and

- Classroom and parent health education.

This framework facilitated the collection of comparable information for the different staff positions. Adaptations were made within the interview forms to accommodate the roles of each of the specific staff positions.

The basic structure for the questions on the parent interview form was as follows:

- Family background;
- Parent's perception of their child's health status;
- Knowledge and use of Head Start health services;
- Medical information (including immunizations);
- Dental information;
- Mental health information; and
- Health education for children and parents.

A pilot test of the instruments was completed at both urban and rural programs prior to use in the field. All proposed data collection procedures and instruments were evaluated for the appropriateness and wording of the interview measures, the level of comprehension required to respond to the questions, and the effectiveness of the procedures.[2]

During the data collection, each program supplemented these primary data sources with specific documentation about the Health Component. The documentation included, but was not limited to, the health services plan prepared by the Head Start program, the applicable State Medicaid and public health guidelines, information on parent program activities, and an organizational chart for the program along with staff position descriptions. In addition, the research associates who visited the programs completed a survey about each site visit at the

[2]Spanish versions of the instruments were translated and pilot tested by bilingual data collectors separately from the initial pilot tests.

conclusion of the data collection period in order to provide perceptions of the sites and the data collection activities (see volume III).

3.6 Staffing

CDM and Abt organized a three-member site visit team for each program. The teams were led by a research associate from either CDM or Abt, and included a trained, experienced data collector and an on-site staffer from the Head Start program being visited. A **research associate**, having primary responsibility for data collection, spent one week on-site completing staff interviews and coordinating the collection of parent interviews and child health record reviews. The **data collector**, recruited from the local area or region, spent from 5 to 12 days gathering parents interviews and completing health record reviews. The **on-site staffer** helped to recruit parents and schedule the interviews.

The research associates and data collectors attended two days of training in Washington, DC. Information from the pretest site visits about the data collection plan provided the foundation for this training. Training manuals were prepared and provided to the site visit teams that included study background information, general interviewing and confidentiality procedures, and specific field and administrative procedures.

3.7 Data Collection Procedures

3.7.1 Recruitment of Participants

Following telephone notification, a follow-up letter was sent to Program Directors with a description of the study, soliciting the program's cooperation, requesting the names and sizes of the centers operating within that program, and requesting the names and titles of the

primary staff working in the Health Component of the program. The research staff sent both participant rosters and parent consent forms directly to the on-site staffers, who distributed and collected the forms and scheduled interviews with parents by the data collector and the research associate.

The principal requirement for a good response rate in this effort was the cooperation of Head Start parents and staff members. This was facilitated by conducting interviews after normal working hours or on weekends for respondents who were unavailable during the work day. Approximately 78% of the originally selected sample was interviewed. Alternates were employed for approximately 22% of the interviews and record reviews (see Volume III, Chapter 4). Relatively few parents refused participation, and the primary source of attrition was the inability to locate parents of children who had left the program. Lack of transportation, illness, other commitments, and unexplained missed appointments accounted for additional use of replacements.

3.7.2 Data Collection

The research teams had interview instruments for Head Start staff and parents of Head Start children. In cases where one staff person had more than one role, he or she completed all appropriate interviews. Bilingual research staff conducted interviews in Spanish at programs where parents and/or staff spoke Spanish. In the few cases where parents only spoke another non-English language (e.g. Hmong), the Head Start programs provided an interpreter to assist with the interviews. In addition, the site visit included child health record reviews and observations of some Head Start meals.

3.7.3 Confidentiality

Confidentiality for study respondents was ensured at two levels. When the research staff made initial contact with the Head Start centers, they assured the program staff that this project was a descriptive study, not an evaluation of the center's compliance with the Program Performance Standards. Researchers conducted staff interviews in locations which

guaranteed the privacy of the respondents' answers, and did not share the responses of the individual staff members with other Head Start staff. Only group data related to staff positions across all centers studied have been analyzed. Data from this study have not been used to review the performance of individual programs, centers, or staff members.

Parents received assurances at the start of the interview that their responses would not be shared with Head Start program staff and would be reported only as part of group statistics for all participating Head Start parents. Research staff also assured parents that their children's health problems (including the causes) were not the focus of the study, but that the important information was how health services were provided. Researchers obtained signed, informed consent (Volume IV,Appendix C) from all parents prior to the latter's participation and prior to undertaking the record reviews.

3.8 Record-Keeping Issues

The site visit teams anticipated that the Head Start Child Health Record would be used in the child health files. The record review instrument, therefore, was based on that form. However, only 58.2% of the records reviewed used the Head Start Child Health Record, and these did not always include the most recent version of the form. The remainder of the health records used were locally developed forms that did not always provide all of the information sought on the record abstraction form. This created numerous instances of missing data for certain health conditions or health status reports.

Additionally, the child health files were often not helpful in determining the assessment, prevalence, and treatment of conditions under the mental health and dental domains. For example, mental health reports were often included in the child's education file, and the site visit teams did not always have access to these files. Mental health evaluations and treatment reports were not always maintained by programs in a child's file because of

confidentiality issues. Similarly, approximately 45% of the children did not have a record of having been examined by a dentist, even though this is a requirement of the Program Performance Standards (§ 1304.3-5). This does not mean that dental visits were not completed but, rather, that the information was not included in the health records. The data collectors made every effort to complete the record reviews, but some results must be interpreted with the understanding that the data were not always complete.

3.9 Data Analysis

The research associate reviewed all of the interview forms and record reviews in the field, noting any missing data that needed to be recovered. A second review was completed when the forms were returned to the project office. Upon completion of a site visit and subsequent data checking, all written responses to open-ended questions were transcribed. The research staff used the transcriptions to develop coding categories for use in content analysis and to evaluate the responses to "Other" items that respondents added to the existing lists on the instruments. The interviews were coded by research staff who did not participate in any of the site visits and were, therefore, unfamiliar with any of the respondents and unaware of program or respondent characteristics that might influence their coding.

Data were examined at two levels. The basic database was constructed at the child level and is based on data from the parent interviews and the reviews of the Head Start child health files. These analyses apply to data on immunizations, health conditions, health screenings, examinations, referrals, and services provided to the target children. Data at this level are weighted to produce national Head Start estimates. The second level of data relates to the Head Start staff, whose interviews yielded detailed information about health service delivery, about the barriers and difficulties faced in the provision of required health services, and about the staffing of the Health Component. These data are not weighted due to the

relatively small proportion of the universe of Head Start programs and staff that participated in the study.

As part of the routine data analysis, categorical and ordinal data were compared across the three stratification variables (urbanicity, geographic region, and above or below 50% minority enrollment). These findings are reported in the text only in those cases where meaningful differences are noted across the sub-groups, because of concerns regarding the effects of multiple tests on increasing Type I error. In the presentation of data, where "N" refers to the sample size, it indicates that the entire sample was used. In cases where the sample size is preceded by "n,"this indicates that the sample was less than the entire sample due to missing data or planned skip patterns in the questions.

4.0 PROGRAM STAFFING AND STAFF QUALIFICATIONS

4.1 Overview

A review of the literature over the past two decades uncovers few studies that focus on Head Start program staffing and the qualifications of the Health Component staff who assist families in gaining access to health services. In one, an examination of indices of Head Start program quality (Brush, 1993), researchers noted that programs employing staff with higher levels of education had fewer health items out of compliance with Federal regulations, as measured by data collected on the On-Site Program Review Instrument (OSPRI). In the same vein, a Task Force charged to study and make recommendations to strengthen Head Start's Health Component urged in its report that Head Start set minimum education and experience requirements for Health Component Staff, and develop career paths and staffing patterns that will promote program quality (Head Start Health Coordinator's Task Force Report, 1990). Related to this, many Head Start Program Directors, in responding to a General Accounting Office (GAO) survey, reported that they had insufficient qualified staff to meet the complex needs of the children and families that they serve, and that low salaries hampered their ability to hire qualified staff (GAO, 1994).

4.2 Findings

The data presented in this section were obtained primarily from interviews with Head Start program staff. These staff members included: Health Coordinators (42), Mental Health Coordinators (37), Nutrition Coordinators (39), Parent Involvement Coordinators (42), and Center Directors (59). It should be noted that, at some Head Start programs, more than one individual was interviewed for a given staff position (i.e., Health Coordinator and Parent Involvement Coordinators) because more than one person was functioning in that role. For other staff positions (i.e., Mental Health Coordinators and Nutrition Coordinators), fewer than

40 interviews are reported upon because not every program had a person filling the role or the staff members was not available. In the case of Center Directors, for some of the programs included in the study, one individual was responsible for both centers visited.

4.2.1 Program Staffing

This section presents data collected on: program staffing, staff roles, and the issue of staff performing multiple roles.

Program Staffing. Exhibit 4-1 presents staff responses regarding their work experience in Head Start. While most staff reported that they had worked for Head Start for approximately 9 or 10 years, Center Directors reported average job tenures of almost 15 years. All staff reported working in their current position for approximately 5 or 6 years on average.

Health Coordinators, Parent Involvement Coordinators, and Center Directors reported being paid to work approximately 39 hours per week, while Mental Health and Nutrition Coordinators reported being paid to work approximately 36 hours per week. All staff, however, reported actually working an average of 5 to 7 hours more than the number of hours a week for which they were paid. Those staff reporting multiple roles were asked how many hours per week they spent working in their primary role. Responses varied from approximately 25 hours for Health Coordinators to approximately 10 hours for Mental Health Coordinators. In general, program staff reported performing multiple roles for between 4 to 7 years. Multiple staff roles are further discussed later in this chapter.

Exhibit 4-1 Program Staffing of the Health Component

	Respondent				
	Health Coordinator	**Mental Health Coordinator**	**Nutrition Coordinator**	**Parent Involvement Coordinator**	**Center Director**
Mean Number of Years with Head Start	9.0	10.5	8.7	10.7	14.5
Mean Number of Years in Current Position	5.5	5.9	5.0	5.8	6.6
Mean Number of Hours per Week Paid	38.8	36.4	36.2	39.0	38.8
Mean Number of Hours per Week Worked	43.8	42.5	41.2	45.2	45.8
Mean Number of Hours per Week Spent in Capacity of Current Position	24.8	10.1	16.9	23.2	21.6
Average Number of Years Performing Multiple Roles*	4.6	5.3	7.3	5.1	6.4
N	**42**	**37**	**39**	**42**	**59**

NOTE: Questions were open-ended.
*Averages are calculated only for those performing multiple roles.

Staff Roles. The Head Start program staff interviewed were presented with a list of tasks that Health Component staff might perform, and were asked to indicate the tasks that they, themselves, performed, and those performed by others. Then, from the list of tasks that they did themselves, staff were asked to identify the three tasks that they performed most

frequently. What emerges from their responses is that most Health Component staff are involved in both the role of "broker" of health services and in the direct provision of services.

Health and Mental Health Coordinators tend to typify the dual role of health service provider/broker. Both staff positions were involved in conducting screenings and examinations, reviewing the results of these tests and consulting with other Health Component staff in assessing their implications for the health needs of the children in their charge. When a health need was identified, both Health and Mental Health Coordinators devoted a great deal of time coordinating the actual delivery of services with other Head Start staff, as appropriate, and working with health care providers both in arranging for treatment and in following up on the treatment provided and its ramifications for further service requirements. Health and Mental Health Coordinators also reported that they spend a significant amount of their time conducting health/mental health education classes for parents and teachers and engaging in interagency collaborations.

Nutrition Coordinators were primarily involved in the planning, purchase, and delivery of food to the children enrolled in the program. They also conduct growth screenings and assist with the identification of child, family and community nutrition problems by conducting nutrition assessments, providing nutritional counseling, and conducting nutrition education classes for teachers and parents. In providing these services, the Nutrition Coordinators work closely with other Health Component staff and also collaborate with other nutrition-oriented agencies in the community such as the U.S. Department of Agriculture (USDA) Food Service and the Child and Adult Care Food Program (CACFP).

Parent Involvement Coordinators provide a major link between the parents of enrolled children and Head Start program staff. Parent education appears to be the primary mechanism through which this is accomplished, and it may serve as the basis for the other activities that the Parent Involvement Coordinators most often perform, such as coordinating services with other program staff and making or arranging referrals for Head Start families.

Center Directors reported that they had direct involvement in health-related activities, such as providing health education to children in the classroom, as well as conducting parent education and teacher training on health-related topics. Center Directors also reported that they worked with local community health providers both in making arrangements for services to be delivered to children in need, and also in following up on referrals made by other Health Component staff.

Multiple Staff Roles. As mentioned earlier in this chapter, many staff reported that they performed roles in multiple staff positions. While approximately one third of the Center Directors (32.2%) interviewed reported that they had responsibilities in addition to their Center Director responsibilities, half or more of the respondents in each of the other staff positions associated with the Health Component reported performing multiple roles: 50.0% of the Health Coordinators, 56.4% of the Nutrition Coordinators, 66.7% of the Parent Involvement Coordinators, and 78.4% of the Mental Health Coordinators.

The relationship between staff performing multiple staff roles and program enrollment is presented in Exhibit 4-2. The pattern that emerges suggests that Health Component staff in programs with enrollments of fewer children were more likely to perform multiple functions.

Exhibit 4-2 Percentage of Health Component Staff Reporting Multiple Roles by Program Enrollment

Health Component Program Staff	Multiple Roles			
	Yes	No	Number	Percent
Health Coordinator				
Enrollment under 500	70.6	29.4	17	(40.5)
Enrollment 500-999	53.8	46.2	13	(30.9)
Enrollment 1,000 or more	16.7	83.3	12	(28.6)
	50.0	50.0	42	(100.0)
Mental Health Coordinator				
Enrollment under 500	81.2	18.8	16	(43.3)
Enrollment 500-999	100.0	0.0	10	(27.0)
Enrollment 1,000 or more	54.5	45.5	11	(29.7)
	78.4	21.6	37	(100.0)
Nutrition Coordinator				
Enrollment under 500	75.0	25.0	16	(41.0)
Enrollment 500-999	58.3	41.7	12	(30.8)
Enrollment 1,000 or more	27.3	72.7	11	(28.2)
	56.4	43.6	39	(100.0)
Parent Involvement Coordinator				
Enrollment under 500	83.3	16.7	18	(42.9)
Enrollment 500-999	64.3	35.7	14	(33.3)
Enrollment 1,000 or more	40.0	60.0	10	(23.8)
	66.7	33.3	42	(100.0)
Center Director				
Enrollment under 500	52.2	47.8	23	(39.0)
Enrollment 500-999	21.1	78.9	19	(32.2)
Enrollment 1,000 or more	17.6	82.4	17	(28.8)
	32.2	67.8	59	(100.0)

This issue also was examined from a slightly different perspective for the Health Coordinators, by looking at the number of Head Start centers for which they are responsible. As can be seen from Exhibit 4-3, again, there is an inverse relationship, with the proportion of Health Coordinators reporting multiple roles decreasing as the number of centers increases. Thus, it appears that while staff in smaller programs are more likely to wear "multiple hats," the staff roles and functions in larger programs seem to be more cleanly delineated. It should be pointed out that this issue may be related to the locus of activity (e.g., Program level versus Center level), and the fact that many large programs may have extra staff working under the direction of the Health Coordinator. In addition, this relationship of multiple versus singular roles and program size may well have some bearing on the variability of compliance with health services regulations among programs of different sizes as reported in an earlier study (Brush, 1993). Further investigation of this phenomenon in the future would seem warranted.

Exhibit 4-3 Percentage of Health Coordinators Reporting Multiple Roles by the Number of Centers for Which They are Responsible

Number of Centers For Which Responsible	Multiple Roles		N
	Yes	No	
1-9	61.1	38.9	18
10-19	53.9	46.1	13
20 or More	27.3	72.7	11
			42

Most of the staff interviewed for this study reported that they performed one or two roles (Exhibit 4-4); however, substantial proportions performed three or more (Health Coordinators reported performing three or more roles more often than other staff). Respondents who indicated that they performed multiple staff roles were questioned about the

other roles they performed. These "other roles" are presented in Exhibit 4-5. Substantial proportions of Health Coordinators reported that they also performed the roles of Mental Health Coordinator (21.4%), Disabilities Coordinator (21.4%) and Nutrition Coordinator (19.0%). The principal other activity reported by Mental Health Coordinators included performing the role of Disabilities Coordinator (27.0%) (Note: Disabilities Coordinators were not interviewed during this study). Nutrition Coordinators indicated that they also performed as Disabilities Coordinator (7.7%), and Education Coordinator (7.7%). A third of the Parent Involvement Coordinators reported that they also acted as Family Services Coordinator. Approximately twelve percent (11.9%) of the Center Directors reported that their principal other role was functioning as a teacher, and 6.8% also indicated that they served as Family Services Coordinator. The tendency for individuals in these staff positions to perform multiple roles may create a strain on their ability to accomplish all of the requirements of any one of these positions.

Exhibit 4-4 Percentage of Health Component Staff Performing Specific Numbers of Staff Roles

Number of Roles Performed	Health Coordinator	Mental Health Coordinator	Nutrition Coordinator	Parent Involvement Coordinator	Center Director
1	50.0	21.6	43.6	33.3	67.8
2	14.3	48.7	30.8	42.9	22.0
3	26.2	18.9	15.4	16.7	3.4
4 or more	9.5	10.8	10.2	7.1	6.8
N	42	37	39	42	59

Exhibit 4-5 Staff With Multiple Roles: Percentages Reporting Activities Performed in Other Roles

	Respondents				
Other Roles	**Health Coordinator**	**Mental Health Coordinator**	**Nutrition Coordinator**	**Parent Involvement Coordinator**	**Center Director**
Health Coordinator	0.0	2.7	0.0	0.0	0.0
Mental Health	21.4	0.0	2.6	0.0	0.0
Nutrition Coordinator	19.0	5.4	0.0	0.0	0.0
Parent Involvement	0.0	0.0	0.0	0.0	0.0
Center Director	0.0	0.0	0.0	0.0	0.0
Disabilities	21.4	27.0	7.7	0.0	0.0
Education	4.8	5.4	7.7	4.8	3.4
Family Services	2.4	2.7	2.6	33.3	6.8
Teacher	0.0	0.0	0.0	0.0	11.9
Miscellaneous Roles	9.5	29.7	25.6	16.7	18.6
N	**42**	**37**	**39**	**42**	**59**

NOTE: Question was open-ended, and respondents could report performing one or more additional roles

Sizable proportions of respondents in each staff category indicated that they also performed other miscellaneous roles. Health Coordinator activities included, among others, acting as a translator, and serving as a member of the Dental Board and the Children's Partnership Board. Mental Health Coordinators also served as Special Education Coordinator, Center Director Supervisor, and Crisis Intervention Coordinator. Among the "other" roles of Nutrition Coordinators were Assistant Director, Custodian Supervisor, and Drinking Water Monitor. Parent Involvement Coordinators cited activities such as Home-based Program Supervisor, Support Staff Supervisor, and Agency Coordinator. For Center Directors, these roles/activities

ranged from acting as Program Director or Area Director to acting as back-up bus driver and janitor.

In general, multiple role respondents reported that they had been hired to perform more than one role. Between one half and two thirds of the respondents in each staff position indicated that this was the primary reason for performing multiple roles. Other reasons, also cited by substantial proportions of Center Directors and Mental Health Coordinators, were program evolution and staff changes.

When asked what, if any, problems accompanied performing more than one role, large proportions (between 66% and 86%) of the respondents in each staff category cited time constraints as a problem. Insufficient salary for the job demands was also indicated as a problem by many respondents in all staff positions.

Staff responses regarding multiple staff roles appear to be linked to concerns expressed by staff about program-related barriers to care facing Head Start families (see Chapter 5: Program Procedures and Linkages with the Community). When discussing program-internal barriers to care, respondents indicated that limited Head Start and Health Component budgets and staff shortages were common barriers. The fact that substantial proportions of staff perform multiple roles (for which they were hired), and that this situation poses significant time constraints, may be the underlying basis for these staff perceptions. These conditions also may be related to the reports of Head Start Program Directors (GAO, 1994) that they have insufficient qualified staff to meet the needs of the children and families they serve.

4.2.2 Staff Qualifications

Staff Education. Previous research has suggested that programs that employ staff that are more highly educated score better on indices of Head Start program quality (Brush, 1993), and that Program Directors perceive that low Head Start salaries hamper their ability to hire qualified staff (GAO, 1994). Thus, against this backdrop, staff education was a major focus of

this investigation. When asked about the highest level of education they had achieved, (see Exhibit 4-6), the proportion of respondents reporting Bachelor Degrees (or higher) varied among the staff positions, from a high of 67.7% among Mental Health Coordinators (66.7% of Nutrition Coordinators also reported a Bachelor degree or higher) to a low of 33.3% among Health Coordinators. Larger proportions of respondents in programs with enrollments of 1,000 or more reported a Bachelor or Nursing Degree (or higher) than did their counterparts in programs with enrollments under 500 (see Exhibit 4-7). Results for the mid-size programs (enrollments of 500-999) were varied. This suggests that larger programs are more successful in attracting more highly educated staff, perhaps because their funding levels allow them to pay the salaries that the higher education credentials claim. Larger programs may also have Program Coordinators with Bachelor or Nursing Degrees who supervise staff who have not attained these qualifications.

Exhibit 4-6 Highest Level of Education as Reported by Staff

	Respondents				
Highest Level of Education	**Health Coordinator**	**Mental Health Coordinator**	**Nutrition Coordinator**	**Parent Involvement Coordinator**	**Center Director**
Some High School	2.4	—	—	—	—
High School/ GED Diploma	4.8	2.7	7.7	4.8	3.4
Some College	23.8	16.2	17.9	33.3	25.4
Associate's Degree	4.8	8.1	—	7.1	33.9
Nursing Diploma (no college degree)	30.9	5.4	7.7	—	—
Bachelor's Degree	19.0	27.0	38.5	35.8	22.0
Graduate School (no degree)	—	2.7	10.3	7.1	5.1
Master's Degree	11.9	32.5	17.9	9.5	8.5
Doctorate/MD	2.4	5.4	—	2.4	1.7
N	**42**	**37**	**39**	**42**	**59**

Exhibit 4-7 Percentage of Health Component Staff Reporting Bachelor or Nursing Degrees (or Higher) by Program Enrollment

Health Component Program Staff	Bachelors or Nursing Degree (or Higher)			
	Yes	No	Number	Percent
Health Coordinator				
Enrollment under 500	64.7	35.3	17	(40.5)
Enrollment 500-999	53.8	46.2	13	(30.9)
Enrollment 1,000 or more	75.0	25.0	12	(28.6)
	64.3	35.7	42	(100.0)
Mental Health Coordinator				
Enrollment under 500	56.2	43.8	16	(43.3)
Enrollment 500-999	90.0	10.0	10	(27.0)
Enrollment 1,000 or more	81.8	18.2	11	(29.7)
	73.0	27.0	37	(100.0)
Nutrition Coordinator				
Enrollment under 500	62.5	37.5	16	(41.0)
Enrollment 500-999	83.3	16.7	12	(30.8)
Enrollment 1,000 or more	81.8	18.2	11	(28.2)
	74.4	25.6	39	(100.0)
Parent Involvement Coordinator				
Enrollment under 500	44.4	55.6	18	(42.9)
Enrollment 500-999	71.4	28.6	14	(33.3)
Enrollment 1,000 or more	50.0	50.0	10	(23.8)
	54.8	45.2	42	(100.0)
Center Director				
Enrollment under 500	21.7	78.3	23	(39.0)
Enrollment 500-999	52.6	47.4	19	(32.2)
Enrollment 1,000 or more	41.2	58.8	17	(28.8)
	37.3	62.7	59	(100.0)

Much higher and consistent proportions of staff from Head Start programs sponsored by School Systems reported Bachelor Degrees than did staff from programs sponsored by other types of organizations (see Exhibit 4-8). This may reflect a value placed on academic credentialing in school systems. It should also be noted that none of the Indian Tribe respondents reported a Bachelor or Nursing Degree. (or higher).

Exhibit 4-8 Percentage of Health Component Staff Reporting Bachelor or Nursing Degrees (or Higher) by Type of Sponsoring Agency

	Respondents				
Program Sponsor	**Health Coordinator**	**Mental Health Coordinator**	**Nutrition Coordinator**	**Parent Involvement Coordinator**	**Center Director**
CAA*	58.8	56.3	64.7	42.1	20.8
School System	100.0	100.0	100.0	83.3	66.7
Private/ Public Non-Profit	60.0	53.8	83.3	58.3	35.0
Government Agency**	100.0	100.0	100.0	66.7	100.0
Indian Tribe	0.0	0.0	0.0	0.0	0.0

*Community Action Agency
**Any government agency other than a public school system or a Community Action Agency (CAA).

When staff respondents were asked to volunteer (open-ended question) the fields in which they held degrees, Center Directors, Mental Health Coordinators, and Parent Involvement Coordinators most often reported Education and/or Early Childhood Development. Nutrition Coordinators generally indicated academic training in the areas of Food and Nutrition/Dietetics and Home Economics.

Of the one third of the Health Coordinators who had completed college and/or at least some graduate school, over half had specialized in the field of nursing. Approximately another third (30.9%) of the Health Coordinators reported that they had a Nursing Diploma, and these

respondents were fairly evenly divided between Registered Nurses (RNs) and Licensed Practical Nurses (LPNs). Overall, approximately two out of five of the Health Coordinators interviewed reported having received training in nursing. These findings should again be viewed in the context of the Brush (1993) finding that more highly educated Health Coordinators are better able to meet the Head Start Program Performance Standards, and the conclusion of the Health Coordinators' Task Force (HCTF) (1990) that, based on its review of a wide range of credentialing bodies and educational programs, the B.S. in Nursing Programs appeared to provide their graduates with all of the knowledge and skills the HCTF identified as being required for the Health Coordinator position.

However, the fact that more Health Coordinators tended to have nursing diplomas than baccalaureate degrees may be an indication of when the individuals received their training. Three quarters of the respondents reporting a nursing diploma received their credential in the 1950s, '60s and '70s, when these types of programs were more prevalent. Currently, only a small number of nursing graduates come from these programs (Bureau of Labor Statistics, 1996).

The relationship between holding a Bachelor or Nursing Degree and performing multiple roles is examined in Exhibit 4-9. For staff holding Bachelor or Nursing Degrees, a majority of respondents in each staff category, except Center Directors, reported performing multiple roles. However, since many respondents with less than a Bachelor or Nursing Degree also report multiple roles, the real relationship between academic qualifications and performing multiple roles is not readily apparent.

Exhibit 4-9 Percentage of Health Component Staff With or Without Bachelor or Nursing Degrees (or Higher) Reporting Multiple Roles

Health Component	Multiple Roles			
Program Staff	**Yes**	**No**	**Number**	**Percent**
Health Coordinator				
Less than BS/BA/Nursing	40.0	60.0	15	(35.7)
BS/BA/Nursing or higher	55.6	44.4	27	(64.3)
	50.0	50.0	42	(100.0)
Mental Health Coordinator				
Less than BS/BA/Nursing	90.0	10.0	10	(27.0)
BS/BA/Nursing or higher	74.1	25.9	27	(73.0)
	78.4	21.6	37	(100.0)
Nutrition Coordinator				
Less than BS/BA/Nursing	70.0	30.0	10	(25.6)
BS/BA/Nursing or higher	51.7	48.3	29	(74.4)
	56.4	43.6	39	(100.0)
Parent Involvement Coordinator				
Less than BS/BA/Nursing	52.6	47.4	19	(45.2)
BS/BA/Nursing or higher	78.3	21.7	23	(54.8)
	66.7	33.3	42	(100.0)
Center Director				
Less than BS/BA/Nursing	32.4	67.6	37	(62.7)
BS/BA/Nursing or higher	31.8	68.2	22	(37.3)
	32.2	67.8	59	(100.0)

4.2.3 Staff Certification and Training

Staff Certification. Program staff were asked whether they held any current job-related certificates or licenses. Their responses to this (open-ended) question are presented in Exhibit 4-10 (the reader should note that, since respondents could report holding multiple certificates/licenses, column percents in this exhibit may not add up to 100%). The open-ended nature of this question may account for the generally low response rates observed in this table. The certificate/license most often mentioned was First Aid, which was cited by 41.3% of the Health Coordinators. This was followed by Cardiopulmonary Resuscitation (CPR) (14.3%).

Among the other staff interviewed (Mental Health, Nutrition, and Parent Involvement Coordinators), there was little consensus in terms of specific certificates/licenses. There were also several "Other" certificates/licenses reported, each cited by one or two individuals. These account for the substantial proportions appearing in the "Other" category in Exhibit 4-10. The areas in which these "Other" certificates/licenses were held included: Audio Screening, EKG Technician, Emergency Medical Technician, Psychiatric Nursing, Pharmacology, and Family Development.

Staff Training. Staff interviewers also inquired about the training provided to Head Start staff. Center Directors and Health Coordinators were asked about the training provided at their centers during the 1993-94 program year. Three quarters or more of the respondents interviewed reported that they provided training on the following health topics: nutrition, neglect/abuse, children with special needs, growth/development, CPR, and First Aid/safety.

Exhibit 4-10 Percentage of Staff Holding Selected Certificates and/or Licenses

Certificate/ License	Respondents				
	Health Coordinator	Mental Health Coordinator	Nutrition Coordinator	Parent Involvement Coordinator	Center Director
CPR	14.3	8.1	2.6	2.4	8.5
First Aid	41.3	5.4	5.1	2.4	6.8
State Nursing License	9.5	—	2.6	—	—
Licensed Practical Nurse (LPN)	9.5	2.7	2.6	—	—
Registered Nurse	11.9	2.7	—	—	—
Certified Nurse's Aid	2.4	—	—	2.4	—
Licensed Social Worker	4.8	2.7	—	14.3	1.7
Unspecified Teaching Certificate	9.5	13.5	5.1	7.1	10.2
Child Development License	9.5	10.8	2.6	11.9	35.6
Registered Dietician	—	—	15.4	—	—
Child Center Permit	—	—	—	—	11.9
Other*	11.9	32.4	23.1	11.9	20.3
N	**42**	**37**	**39**	**42**	**59**

Note: Question was open-ended. Staff could report multiple certificates/licenses.
*The "Other" category includes areas in which only one or two individuals reported holding specific certificates/licenses.

Since the training of Health Coordinators was deemed to be of critical importance to the functioning of the Health Component, these individuals were asked what training on health issues for young children and their families they, personally, had received since September, 1993. When presented with a list of training topics, a majority of the Health Coordinators reported that they had received training in 15 of the 20 topic areas cited (see Exhibit 4-11). This training was generally provided by other program staff or by local consultants or community providers. The responses to this "closed-ended" question regarding the training that the Health Coordinators received should be compared with the responses to the previous "open-ended" question regarding the certificates/licenses that they held (see Exhibit 4-10). Two topic areas that can be contrasted directly are First Aid, and CPR. When asked specifically whether they had received training in these areas, approximately eight out of ten of the Health Coordinators said they had, a far higher proportion than those that responded to the earlier question regarding certification.

In reviewing Exhibits 4-10 and 4-11, the reader should be aware of the distinction between receiving training and being certified. A respondent may have been certified at one time, but not at the time of the interview, and may also have received training in an area without being certified in that area.

Exhibit 4-11 Percentage of Health Coordinators Receiving Training on Selected Health Topics

Training	Percent
Substance Abuse	83.8
Neglect/Abuse	83.8
Disabilities	83.8
First Aid/Safety	81.6
Children with Special Needs	81.1
CPR	78.9
General Health	76.3
Growth/Development	76.3
Nutrition	75.7
Family Violence	73.0
Universal Precautions	73.0
Mental Health	71.1
Dental Health	71.1
Social Emotional Development	64.9
Eating Habits	63.2
Hearing Condition	50.0
Vision Conditions	48.6
Neurological Conditions	40.5
Language Development	39.5
Physical Fitness/Activity	37.8
N	**42**

4.3 Summary

This chapter described the characteristics of the programs included in the study sample related to program staffing and training as reported by staff associated with the Health Component. The highlights of those responses are presented below.

- Staff interviewed reported working in Head Start for average periods ranging between 9 (Health and Nutrition Coordinators) and 15 (Center Directors) years, and working in their current positions between 5 and 7 years.

- Many staff reported that their highest level of education was a college degree or some college; approximately 40% of the Health Coordinators reported that they had nursing training, and approximately one third of the Mental Health Coordinators interviewed indicated that they had a master's degree.

- Approximately one third of the Center Directors and half or more of each of the other staff positions associated with the Health Component reported performing multiple staff roles. The major problem associated with performing multiple staff roles most often cited was the time constraints posed by the additional workload. Substantial proportions of staff reported that they had been hired to perform multiple roles.

- Most of the Health Component staff are involved in both the role of "broker" of health services, and in the direct provision of services. Health and Mental Health Coordinators tend to typify the dual role of provider/broker through their involvement in conducting screenings and examinations, reviewing test results, and coordinating/arranging the actual delivery of services by health care providers.

- There is an inverse relationship between program size (enrollment) and performing multiple roles: Health Component staff in programs with smaller enrollments more often report performing multiple roles than do staff in larger programs.

- Of Health Component staff performing multiple roles, the greatest degree of overlap/substitution occurs among staff in the Health, Mental Health and Nutrition Coordinator positions.

- Staff responses regarding multiple staff roles appear to be linked to concerns about program-related barriers to care facing Head Start families, in that respondents indicated that limited Head Start and Health Component budgets and staff shortages were common barriers.

- Larger proportions of staff respondents in programs with enrollments of 1,000 or more reported that they possessed Bachelor Degrees than did their counterparts in programs with enrollments under 500 (results for programs with enrollments of 500-999 were varied), suggesting that larger programs are more successful in attracting more highly educated staff.

- Higher proportions of staff from Head Start programs sponsored by School Systems reported Bachelor Degrees than did staff from programs sponsored by other types of organizations, perhaps reflecting a value that scholastic organizations place on academic credentials.

5.0 PROGRAM PROCEDURES AND LINKAGES WITH THE COMMUNITY

5.1 Overview

In order to carry out the requirements of the Program Performance Standards, each Head Start program must develop and implement a plan to meet component objectives. Aspects of these procedures are often unique to specific programs, because each program must operate within the restrictions or framework set by their internal organization (e.g., if the grantee is a school system versus a Community Action Agency), the physical size of the program (e.g., the number of enrolled children, the geographic size of the designated service area), and the availability of community resources (e.g., the number of providers, provider acceptance of Medicaid).

Program procedures ensure that enrolled children receive the required health screenings and examinations and that all parents become actively involved in the health care of their children. Procedures also include activities designed to address preventive health issues with children and families.[1] Finally, the health section of the Program Performance Standards (§1304.3) requires that programs implement procedures, including the establishment of a Health Services Advisory Committee (HSAC), which enable staff to be responsive to community health needs that affect the children that they serve. Programs are expected to use available community resources to benefit Head Start children and families by establishing working relationships with appropriate organizations or institutions in the communities they serve. The establishment and expansion of community linkages was one of the major policy recommendations of the Advisory Committee on Head Start Quality and Expansion (1993).

[1] Preventive health issues and procedures are discussed in Chapter 6: Health Education and Chapter 7: Immunizations.

Some Head Start programs have already developed community collaborations, and the experiences of these programs may provide valuable information for other Head Start programs and community organizations. Head Start is in a good position to serve as an information resource because it is the only public agency in the country that is required to report on the health needs of low-income preschoolers, their access to services, and the health care resources that are available at the community level (Bell & Jones, 1993).

The Program Performance Standards require that programs identify and address the health problems of their local service areas (§1304.3-3; §1304.3-9). Certain health screens for children may be required based on these periodic assessments of community health conditions (e.g., increases in the prevalence of lead poisoning or intestinal parasites). Additionally, as part of Head Start's efforts to help families obtain the health services indicated by screening efforts, programs are required to explore and use all available community resources to the maximum extent possible (Program Performance Standards, §1304.3-4) (see Chapter 2: Historical Context of the Health Component). Programs also are required to inform parents about available health resources and assist parents in gaining access to care.

5.1.1 Community-Based Services

Effective health and developmental interventions occur when Head Start staff thoroughly understand all of the interconnected variables affecting a particular child's environment. These variables include internal family factors such as finances, culture, and religion, external conditions like neighborhood safety and housing, and the availability of health resources. Health care needs can only be met when all of these factors are considered together (Scott, 1993).

The effective transfer of health care information from the Health Coordinator or a member of the Health Component staff to the family member responsible for connecting the child with the health care system is an essential aspect of program procedures. Health

Coordinators serve as brokers for Head Start parents with community-based providers. By assisting with identifying providers, furnishing information and assistance, and securing necessary funding, Head Start staff provide support for parents in negotiating the health care system themselves. This means enabling parents to make and keep appointments with appropriate service providers in the local community and to obtain follow-up treatment for conditions identified through screenings and examinations. Head Start's objective is that parents be in a position to assume sole responsibility for these tasks upon completing the program.

The Health Coordinator is assisted by the Health Services Advisory Committee (HSAC), a mandated committee that helps in the planning, operation and evaluation of the Health Component (§1304.3-2). The HSAC consists of Head Start parents and staff as well as community representatives. The benefits of this relationship are twofold. First, it increases the opportunities for parents to develop the skills required to establish and maintain relationships with the health services providers that their children need. The second benefit is increased awareness among local health care providers of ways to improve their practices to better serve those who have traditionally had problems accessing services.

5.1.2 Barriers to Care

It is critical that each Health Coordinator, each member of the health staff, and the HSAC be aware of both the financial and the non-financial barriers to health care facing the families they serve (see Chapter 2: Historical Context of the Health Component). The health staff must navigate the local health care system and facilitate access to care for these families. The HSAC can ease the brokering process by initiating communication with individual providers, hospitals, clinics, and other community resources to provide parents with appropriate bridges to health care in their communities. The HSAC is intended to lend organizational weight to the Health Coordinator in breaking down barriers to access. However, the success of the Head Start system in facilitating access to health care is

dependent on the ability of the Head Start staff, the community, and the parents to overcome the challenges they face in obtaining proper health care.

5.2 Findings

The findings in this chapter are based on staff reports about program procedures and community collaborations. Parents' reports of information provided by Head Start are included, as are Head Start staff reports on barriers to care and the activities that their programs use to help families overcome these barriers. Finally, staff perceptions of community health risk factors that may impact on Head Start children are discussed.

5.2.1 Community Resources

Medicaid and the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Program. Since many children enrolled in Head Start are eligible for Medicaid and can receive EPSDT services (see Chapter 2: The Historical Context of the Health Component), Head Start staff and parents were questioned about Medicaid eligibility, enrollment, and utilization.

When parents were asked how they paid for health care services when their children became ill, 68.1% reported Medicaid as a source of payment (see Exhibit 5-1). This finding is very similar to the data from the 1993-94 PIR presented in Chapter 3: Methodology (see Exhibit 3-1). It should be noted that parents could report multiple payment sources and that, over the course of a year, parents could have made use of several, perhaps all, of the payment sources listed.

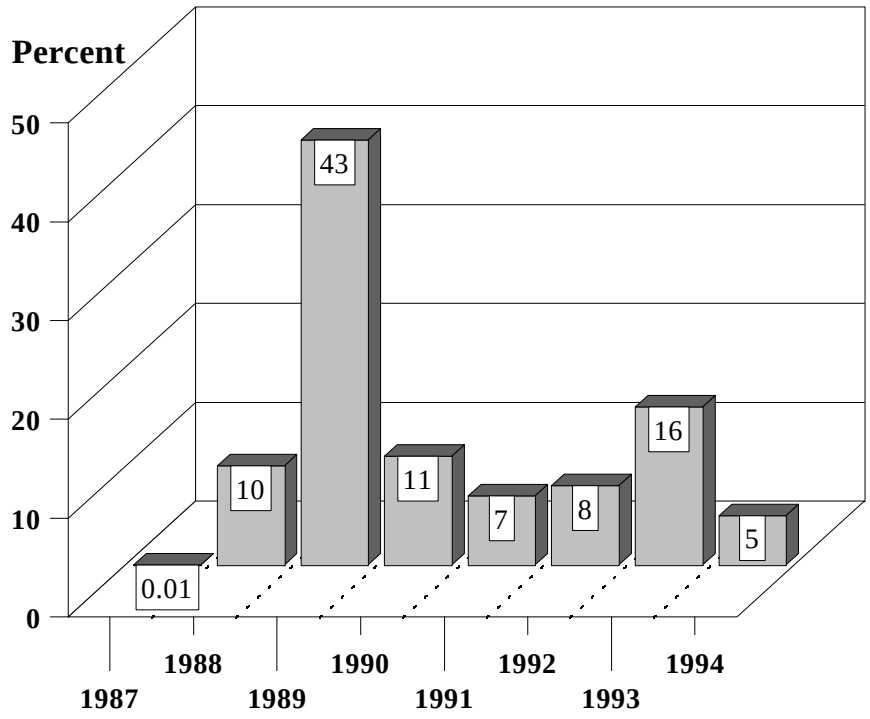
Exhibit 5-1 Payment Sources for Health Services as Reported by the Parents

Payment Source for Health Services	Percent
Medicaid	68.1
Private Insurance	20.9
Direct Payment (out-of-pocket)	16.1
Free Care	4.2
Other	2.9
N	**1,189**

Note: Parents could report multiple payment sources.

Exhibit 5-2 shows the year of enrollment for children who were enrolled in Medicaid at the time of the parent interview. Of the 729 children for whom the date of Medicaid enrollment was available, almost two thirds (64.0%) were enrolled at or near the time of their birth (during the years 1988-90), and an additional one-fifth (21.0%) were enrolled in Medicaid at about the time they enrolled in Head Start (during the years 1993-94). The enrollment of the latter group may have been influenced by the children's enrollment in Head Start. However, since parents were not specifically asked whether their child's enrollment in Medicaid was directly linked to their enrollment in Head Start, there is no direct evidence to support this conclusion. Parents of children not enrolled in Medicaid reported (see Exhibit 5-3) that they either had other insurance coverage (48.2%) or were ineligible for Medicaid at the time of the interview (41.9%). Few parents reported a lack of knowledge about Medicaid, how it works, or how to enroll as reasons for non-enrollment.

Exhibit 5-2 Year of Enrollment in Medicaid/EPSDT as Reported by Parents



Note: At the time of the parent interview, 803 children were enrolled in Medicaid/EPSDT; of these, time of enrollment was not available for 74 children.

Exhibit 5-3 Reasons Why Child is not Currently Enrolled in Medicaid/EPSDT as Reported by Parents

Reason	Weighted Percent
Have Other Insurance	48.2
Not Eligible (Income)	41.9
Previously Enrolled, but no Longer Enrolled	8.6
Do not Know how to Enroll in Medicaid	2.5
Heard of Medicaid, but do not Understand how it Works	2.4
Have not Heard About Medicaid (EPSDT)	2.0
Paperwork too Difficult to Complete	1.1
n	**386**

Note: Parents could report more than one category.

Health Coordinators at each program site were questioned about procedures employed by the program related to Medicaid enrollment. Almost nine out of ten (85.7%) reported that their programs had a formal process for identifying Medicaid-eligible children enrolled in their programs. This process generally included screening for eligible children at intake, verifying proof of income, and referring eligible children to the appropriate social services agency for assistance in enrollment.

When asked what procedures were used to enroll eligible children in Medicaid, Health Coordinators generally reported that staff explained the Medicaid program to parents and encouraged them to enroll. Staff may then either make appointments and/or take the parent to the Medicaid agency; or they may simply refer parents to the local Medicaid agency. Thus, the findings suggest a concerted effort by staff, especially at intake, to identify Medicaid-eligible children, and that staff may go as far as taking parents to the Medicaid agency to assure enrollment.

5.2.2 Staff Activities with Community Providers

As noted in Chapter 4: Program Staffing and Staff Qualifications, Head Start staff were asked about the specific tasks for which they were responsible in their particular position. This included questions about several tasks that involve working with community providers. Responses to these questions are found in Exhibit 5-4. Many Health and Mental Health Coordinators and, to a lesser degree, Center Directors, reported having responsibility for selecting and reviewing community providers, developing interagency collaborations, and negotiating payments for services. Most of the Nutrition and Parent Involvement Coordinators also indicated that they had some responsibility for establishing interagency collaborations, but they were not asked about their involvement in more direct service provision. Mental health and nutrition consultants associated with the Health Component had little formal responsibility for establishing relationships between Head Start and community providers.

Exhibit 5-4 Responsibilities Relative to Community Collaborations as Reported by Staff

Responsibilities	Percent				
	Health Coordinator	Mental Health Coordinator	Nutrition Coordinator	Parent Involvement Coordinator	Center Director
Review Health Providers	78.6	73.0	--	--	27.1
Select Providers	78.6	73.0	--	--	5.9
Negotiate Payments	68.3	48.6	--	--	5.1
Establish Interagency Collaborations	92.9	91.9	89.7	83.3	55.9
N	42	37	39	42	59

Community Linkages. In providing services to Head Start families, programs must develop relationships with a variety of health providers, consultants, health-related agencies, and service-providing institutions. The Health Coordinators responded to the following open-

ended questions regarding the types of individuals and organizations with whom they had formal or informal arrangements and the types of services or resources which they provided:

- Are there any individual consultants or health professionals outside the Head Start program that are associated with the Health Component? (yes/no) If yes, please list these consultants by title and indicate what roles they perform and/or services they provide.

- Are there any organizations outside the Head Start Program that are involved with the Health Component? (yes/no)
  If yes, please list these organizations by title and indicate what roles they perform and/or services they provide.

The responses were summarized through content analysis procedures. The percentages presented reflect the number of Health Coordinators with a response coded under each category. Because the information provided was not always sufficient for coding (e.g., when a respondent only gave the name of an organization without clearly indicating the type of service provided), not all organizations cited could be linked with the specific services or resources.

Public health agencies (50.0%) and private group providers (28.6%) were the most often reported organizational categories, followed by mental health organizations (23.8%) and public interest/service organizations (23.8%). Because of the great diversity across the communities visited, the Health Coordinators reported a broad range of services and resources as being available to their programs. The most commonly reported services provided by these organizations include medical services (40.5%) and screenings (35.7%), vision screenings and eye care (23.8%), immunizations (23.8%), dental services (21.9%), and nutrition and meal planning services (16.7%). In reviewing the reports on collaboration with community providers, it appears that programs are more likely to link with and receive services from organizations or agencies than from individual providers. However, it was not clear from the responses whether specific agencies, institutions, or individual consultants were used for referrals only or maintained more formal and comprehensive links with Head Start.

Aside from screening activities, many services were not available from individual providers or consultants, and were provided primarily by agencies or institutions with greater resources.

One consequence of this question and the associated findings is that it quickly became apparent that more sophisticated methodologies are required to assess the nature of the relationships between Head Start and available community service providers. While the information in this study provides valuable information on the range of services used, it does not provide insights into the possible range of services that are unused by programs and the reasons why they are unused. Unfortunately, the methodology that would have been most useful in compiling such information—contacting local service providers directly—are costly and time-consuming and were beyond the scope of this study.

The Health Coordinators also furnished information on the affiliations of the individuals who provided specific screening and examination services for enrolled children. A broad range of community organizations and individuals provided physical examinations, most often private practitioners (71.4%), community health centers or clinics (64.3%), and State or local health departments (61.9%). Exhibit 5-5 provides a list of screening tests and the affiliation of the screening staff for the programs that provide the tests. Additional tests, such as vision and hearing screenings and dental screenings, were often provided through Head Start programs. The Program Performance Standards do allow for non-trained staff to conduct some screenings, including height and weight, vision, and hearing. However, information on the actual responsibilities of staff in completing these examinations or screenings were not compiled. This information would be particularly useful in clarifying the role of Head Start staff in conducting physical examinations, hematocrit and hemoglobin testing, and dental screenings.

Exhibit 5-5 Sources of Examination Staff Used for Physical Examinations and Specific Screening Tests Provided Through Head Start as Reported by the Health Coordinators

		Additional Screening Tests Provided Separately From the Physical Examinations as a Percent						
	Physical Examination	**Blood Pressure**	**Vision**	**Hearing**	**Height & Weight**	**Hemoglobin & Hematocrit**	**Dental**	**Speech****
Head Start Staff	31.0	28.6	47.6	45.2	57.1	11.9	16.7	47.6
Private Practitioners	71.4	26.2	14.3	21.4	16.7	23.8	78.6	50.0
State or Local Health Department	61.9	23.8	21.4	16.7	21.4	33.3	45.2	23.8
School Health Programs	19.0	2.4	2.4	4.8	2.4	2.4	14.3	33.3
Hospital or Clinic	57.1	7.1	9.5	7.1	7.1	11.9	28.6	28.6
Community Health Center or Clinic	64.3	9.5	4.8	9.5	9.5	14.3	47.6	26.2
Local Health Professional School	31.0	—	7.1	—	—	—	21.4	7.1
Voluntary Agency	14.3	—	4.8	4.8	—	—	11.9	9.5
Number of Health Coordinators Reporting No Testing*	**0**	**18**	**12**	**12**	**16**	**19**	**3**	**2**

*Note: N=42 Health Coordinators. Respondents could answer in more than one category for each column.
**Additional providers for speech assessments are local universities (non-medical) [9.5%] and public school programs (non-health) [40.5%].

Community Resource Information. The Program Performance Standards require that programs provide parents with information about available health resources and services in their community (§1304.3-6). Many programs provide resource information to families at the time of enrollment in Head Start in the form of booklets or pamphlets. In this study, although the question was open-ended, almost two thirds of the parents recalled receiving such information from program staff at the time of enrollment. It also is noted in Chapter 6: Health Education, that 75% of the parents reported receiving information from Head Start on "helping agencies" in the community.

5.2.3 Child Health Files

Child health files are created during the intake/health screening/examination process and require regular updating and maintenance thereafter. These files typically include medical information noted during screenings and examinations, health history information provided by a parent or caregiver, the status of current treatments, and information on immunizations and Medicaid status. Usually, the files also include information on dental, mental health, and nutrition status. The file is meant to provide an ongoing record of the child's formal health activities and health status while enrolled in Head Start. Center Directors were questioned about who has primary responsibility for ensuring that the health files are reviewed and that the information is up to date. The Health Coordinators were most often reported as having primary responsibility for health record maintenance (37.3%), followed by the Center Director/Head Teacher (23.7%), and the Family Service Worker (20.3%). Only one third of the Mental Health Coordinators (33.3%) reported that they alone had primary responsibility for documenting follow-up mental health evaluations in children's health records. The pattern that emerges here is that the responsibility for the maintenance of both health and mental health records may vary among several different staff members, depending upon the circumstances of the situation. Combining this finding with others regarding the state of the health records cited in Chapter 3, it appears that health and mental health records are sometimes maintained on multiple forms, at multiple locations, for multiple purposes.

5.2.4 Health Screening and Examination Procedures

Health and Mental Health Coordinators and Center Directors were asked about the procedures that are used if a teacher suspects that a child has a serious health or mental health problem. Virtually all of the respondents, over 97%, indicated that their programs had standard procedures in place. In general, teachers discuss the situation with the Center Director, who, in turn, contacts the appropriate Health or Mental Health Coordinator, who contacts the parent to further discuss the situation and, if warranted, makes a referral to in-house staff (e.g., a nurse) or to an outside health care provider. The responsible Health or Mental Health Coordinator documents the problem, and provides follow-up as required. In cases of very large programs, some of these tasks are completed by other members of the health staff who are responsible for children and families at specific centers. These programs may have multiple layers of staff, which enable the health staff to serve a large number of families across broad geographic service areas. Some programs were so geographically spread out that they required the equivalent of regional Health Coordinators.

Almost all of the Health Coordinators (92.9%) indicated that their programs had a mechanism or process for the early identification and screening of children who appeared to have health problems. The processes described generally included physical examinations at entry into Head Start, on-site screenings and classroom observations, and evaluations or screenings by health consultants.

Parent Involvement Coordinators are crucial to the process of informing parents about upcoming health screenings and examinations, and providing them with the results of these tests. They reported that they and other staff accomplished these tasks through a combination of mechanisms. Broad-based procedures include providing information at intake, making announcements at parent meetings, and informing parents through newsletters. Specific parents may be notified privately via telephone calls, letters sent home with their children, home visits, and discussions with a parent while dropping off or picking up a child at the center. Parent Involvement Coordinators also reported that they encouraged parents to attend

health screenings by scheduling screening times to accommodate parents' schedules, by providing more on-site screenings, and by providing transportation for parents when necessary.

Obtaining parental consent for screenings and examinations does not appear to be a problem in most program. A large proportion of Parent Involvement Coordinators (78.6%) and Center Directors (86.4%) reported that parental consent forms were typically returned within 1 week. The only reported obstacle to obtaining parental consent was parents' lack of telephones.

5.2.5 Treatment Procedures

The services most often provided by programs include informing parents about their childrens' health service needs and the treatment services that are available. Treatment services are discussed in more detail in Chapters 8-11. Staff also reported that they identified specific health care providers for parents and helped them coordinate services with providers, as well as followed up with both parents and providers to ensure that the necessary services were actually provided. The picture that emerges is that of the Health Component staff acting as brokers of health services, linking Head Start families with community health care providers.

Health Coordinators also identified the types of treatment available on-site at the center, and their responses are presented in Exhibit 5-6. What can be inferred from the strong division point in this Exhibit is that most treatment, unless directly linked to classroom activities (communication, behavior, meals, etc.), is not provided at the center.

Exhibit 5-6 Types of Treatment Available On-Site at Head Start Centers as Reported by the Health Coordinators

Treatment Type	Percent

Nutritional Counseling	95.1
Speech Therapy	90.2
Mental Health Counseling	70.7
Physical Therapy	31.7
Supplemental Fluoride Tablet Program	29.3
Immunizations	26.8
Other	22.0
Dental Treatment	14.6
N	**42**

In general, staff reported that they followed up on treatment by contacting the parents and providers directly, documenting the treatment in the child's health record, and periodically reviewing the record for completeness. Some staff also reported that they used a computer tracking system to monitor treatment progression.

5.2.6 Barriers to Care

Reports on barriers to health care for families fell into several different categories. Internal barriers are those that existed within programs, while external barriers include both community and personal barriers. Many of the community and personal barriers were discussed in Chapter 2. In this section, all three types of barriers, as reported by Head Start staff, are presented.

Internal Barriers. Internal barriers to care reflect staff perceptions of program-related impediments to the level of services provided to enrolled families. The responses of staff to open-ended questions were categorized using content analysis procedures. Staff from more than 20% of the programs responded that each of four types of internal barriers significantly affected their ability to work with families. These responses suggested that 1)

limited communication across program components, 2) limited component budgets, 3) limited staff education and training, and 4) staff shortages were the most common barriers. Because these responses were to open-ended questions, the frequencies for these categories are likely to be lower than if staff were prompted by limited-choice questions. This is particularly true in light of the staff reports described in the recent report of the General Accounting Office (GAO) on barriers to the provision of Head Start services (GAO, 1994). The GAO report highlighted staffing and funding limitations as the primary internal barriers faced by Head Start programs. These barriers were noted by at least two thirds of the Program Directors surveyed by the GAO.

External Barriers. Of particular interest in this study were staff perceptions of the barriers to care directly faced by the families they serve and how Head Start responds to these barriers. Exhibit 5-7 presents staff reports of community-based barriers that affect parents. Parent Involvement Coordinators' reports of barriers were generally quite high, regardless of the type of barrier. Health Coordinators focused on scheduling and provider-related issues, as did the Mental Health Coordinators. Almost 50% of the latter also cited problems resulting from the lack of specialist providers. This is consistent with the 1994 GAO report, which cited the lack of health professionals willing to accept Medicaid reimbursements to treat Head Start children as a major barrier to care and service provision. As noted in Chapter 2, the failure of community providers to serve the health needs of low-income families has traditionally been a major barrier to the receipt of health services by these families. Chapter 2 also noted a number of family level factors that impact on families' abilities or willingness to seek necessary services. The staff interviews supported this notion, and reported a number of barriers that impede families in obtaining needed health services for children. These barriers, taken from a list presented during the interviews, are shown in Exhibit 5-8. Across staff positions, the most often reported parent-related problems were lack of time and the failure to understand a child's need for treatment, with almost 60% of the Health and Mental Health Coordinators citing the lack of parental understanding. The Mental Health Coordinators were approximately three times more likely than other staff to report parental resistance as a

frequent barrier. The staff differences presented in Exhibit 5-8 clearly reflect the different responsibilities and domains represented by the staff, particularly when focussing on the often misunderstood field of mental health. Interestingly, religious beliefs, although having low frequencies, were only mentioned by only the Parent Involvement Coordinators.

Exhibit 5-7 Specific Community Barriers to Care That Occur Frequently or Always Within Programs as Reported by Staff

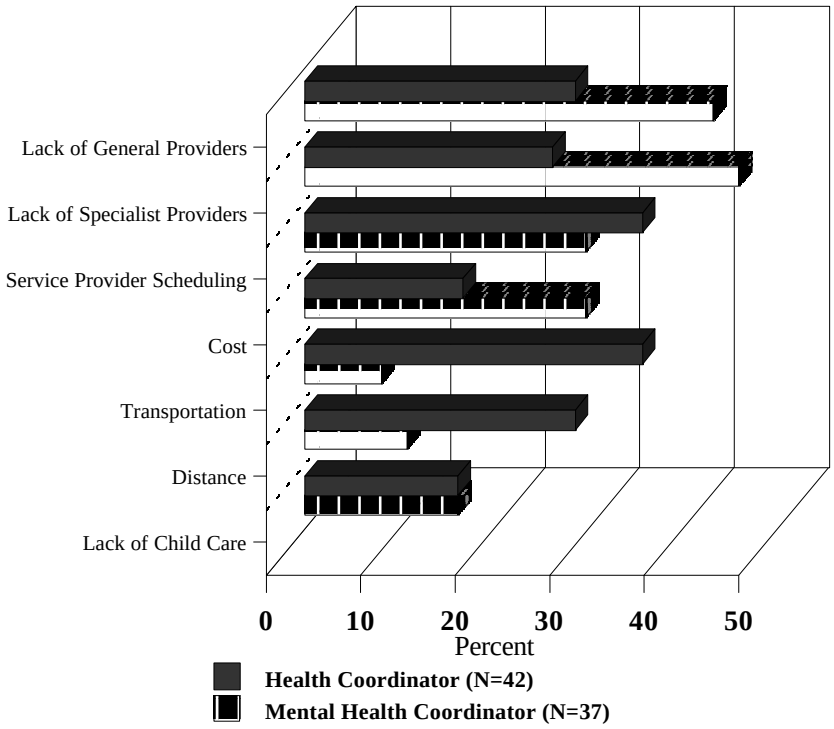
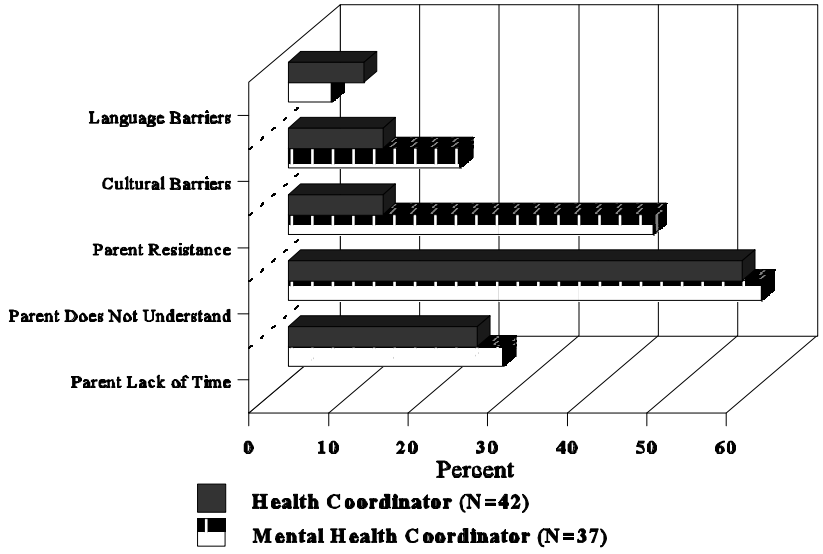


Exhibit 5-8 Specific Personal Barriers to Care That Occur Frequently or Always Within Programs as Reported by Staff



Parents also were given the opportunity to report on barriers to care through an open-ended question about their experiences with accessing health services while enrolled in Head Start. Unfortunately, parental reports of barriers to care were almost nonexistent, allowing no comparison with the staff reports. This may have been due to the open-ended nature of the question. However, some program staff suggested that parents become so caught up in their day-to-day activities that the barriers they face are not always apparent to them. These staff members predicted a low frequency of parental reports.

Program Responses to Barriers. In order to meet the overall program goals of assuring needed health services for children and increasing parents' ability to overcome barriers, local staff must respond to these barriers. Although they differed in their perceptions of the barriers facing parents, Head Start staff were remarkably consistent in their views of the services that their programs provide to families in an effort to overcome barriers to care. Services that Head Start staff identified as being helpful to families primarily fell into five

categories: providing parent education, helping families with provider scheduling, providing Head Start staff education on recognizing and overcoming barriers, providing transportation, and conducting outreach activities with community providers. Chapters 8-11, which cover the four health domains, provide further reports on program efforts to actively involve parents in accessing and obtaining health care for their children.

5.2.7 Perceived Community Health Risk Factors

The Health, Mental Health, and Parent Involvement Coordinators and the Center Directors were asked their perceptions of the three most critical community risk factors affecting the health or mental health status of Head Start children. As seen in Exhibit 5-9, there was a high degree of variability, based on the staff position of the respondent. For example, while substance abuse was rated as being critical by many respondents in each staff position, over 55% of the Mental Health Coordinators listed concerns in this area. Child physical and sexual abuse was also a key risk factor cited by more than twice as many Mental Health Coordinators as by any other staff position. However, some of the risk factors addressed by staff in other positions—inadequate housing or clothing, low immunization rates, poor hygiene, and infection with human immunodeficiency virus (HIV) or other sexually transmitted diseases (STDs)—were not mentioned by the Mental Health Coordinators. The lack of parent education and parenting skills were consistently mentioned as risk factors by approximately 20% of the staff in each position. Surprisingly, the lack of immunizations was rated much higher by the Parent Involvement Coordinators than by other staff. This ranking may reflect the roles that these Coordinators assume in assisting parents obtain health services, particularly parents preparing their children to leave Head Start and enter kindergarten. For example, Parent Involvement Coordinators take an active role in working with parents to prepare families for kindergarten, a transition that involves updating immunizations. This topic is addressed further in Chapter 7: Immunizations.

Exhibit 5-9 Specific Community Health Risk Factors as Reported by Staff

Risk Factors	Percent			
	Health Coordinator	Mental Health Coordinator	Parent Involvement Coordinator	Center Director
Substance Abuse	36.0	56.0	28.0	41.0
Lack of Parenting skills	21.4	16.7	16.7	16.9
Lack of Access to Support Services	19.0	13.5	22.0	15.5
Poor Nutrition	18.9	3.0	21.7	7.0
Poverty	16.5	25.0	9.5	2.5
Lead	16.5	0.0	14.5	5.0
Inadequate Housing or Clothing	11.9	0.0	7.1	11.9
Physical/Sexual Abuse/Neglect	9.5	38.7	14.5	5.0
Community Violence	7.1	19.4	0.0	11.9
Poor Hygiene	7.1	0.0	4.8	8.5
Lack of Immunizations	7.1	0.0	44.9	5.1
Adolescent Pregnancy	2.4	11.1	4.8	3.4
HIV/AIDS/STDs	2.4	0.0	14.3	11.9
N	42	37	39	59

Program Responses to Health Risk Factors. Head Start staff were very consistent in describing how programs address local risk factors. Parenting workshops were listed by 50-70% of the staff as a frequently used method of helping families overcome risk factors, although each of the methods, including interagency collaborations, job counseling and referral, advocacy training for parents, and individual and family counseling, was frequently used by at least 40% of the programs. This is validated by the staff reports cited in Chapter 6 that a majority of programs address health risk factors through their parent education activities. Specific parent education topics, such as providing information on immunizations

(see Chapter 6: Health Education), address some of the risk factors reported by individual staff.

5.3 Summary

Head Start programs are required to establish a plan to assure that staff are able to meet the requirements of the Program Performance Standards. Programs also need to establish cooperative and responsive relationships with other organizations and individual service providers in their local communities. Staff responded to questions about program procedures and community resources. Open-ended questions also elicited responses regarding the perceived barriers to care faced by Head Start families and perceived community health risk factors. The highlights are presented below.

- Over two thirds of the parents reported that Medicaid was the primary source of payment for health services. Of the enrolled children, almost two thirds were enrolled in Medicaid at or near the time of their birth (1988-90) and an additional one-fifth were enrolled during the time they were enrolled in Head Start (1993-94).

(6,34)Reasons for not enrolling in Medicaid were failure to meet eligibility requirements, (income level was too high -- 41.9%) or because other sources of insurance coverage were available (48.2%). Few parents reported a lack of knowledge about Medicaid, how it works, or how to enroll as reasons.

(6,34)The major types of organizations most commonly reported by Health Coordinators as being associated with their Head Start programs were public health agencies and private group providers. The most reported services provided were medical services and screenings, vision screenings and eye care, immunizations, dental services, and nutrition services and meal planning.

- Barriers facing families are both personal and community-based. The latter include the lack of specialists and general health providers. Major personal barriers include parents not understanding the need for treatment services, parents' resistance to using services (especially mental health services), and the lack of time for parents to access services for their children. These barriers are based on staff reports, which vary greatly based on the staff position of the respondent.

(6,34)Staff-reported community health risk factors also varied based on the staff position of the respondent, with substance abuse being most often cited the most.

6.0 HEALTH EDUCATION

6.1 Overview

Health education for Head Start children, parents, and staff is a mandated activity within the health sections of the Program Performance Standards (§1304.3-6). Typical health education activities for children include instruction on basic hygiene, safety, and other health behaviors appropriate for children. Parents are given opportunities to learn the principles of child development, preventive health, safety, and first aid. These activities are clearly linked with a primary goal of Head Start: the development of basic skills and self-sufficiency among the children served and their parents. These activities are also consistent with the Omnibus Budget Reconciliation Act of 1989 (Public Law 101 239, section 6403), which requires that States provide health education as an Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) service for Medicaid-eligible individuals under the age of 21.

Health education activities for children are often integrated within the established activities of the regular Head Start program. For example, nutrition education and proper hygiene are usually incorporated into food and meal-related activities. As part of their nutrition education, children participate in learning activities designed to improve their knowledge, selection, and enjoyment of a variety of foods, and their parents are provided with educational opportunities concerning the selection and preparation of food.

The Health Component staff are assisted by individuals responsible for the Parent Involvement Component to help ensure that parent health education is available to participating families. Education occurs through staff-parent, parent-parent, and parent-child communications and activities. By planning and conducting health-related activities, the Parent Involvement Component assumes a critical role in ensuring the effectiveness of Head Start in the area of child health promotion. The greater the level of parent involvement, the

more likely that parents will be able to assume full responsibility for the health of their family after leaving Head Start. Notably, however, one of the most frequently identified health risk factors identified by Head Start staff was the lack of parenting skills (see Chapter 5, Exhibit 5-9).

In addition, Head Start staff are required to receive training in the principles of child health, behavior, nutrition, and the relationship of these principles to child development. This training should include strategies for creating a sound physical, social, and emotional environment that supports the efforts of the children and their families in achieving adequate knowledge of health and safety. Hopefully, appropriate knowledge, attitudes, and behaviors among staff are disseminated to Head Start children, parents, and other family members. Information on staff training activities is included in Chapter 4: Program Staffing and Staff Qualifications.

This chapter provides a summary of staff and parent reports on the health education opportunities provided for children and parents through their association with Head Start. These reports include information on education related to medical health, dental health, mental health, and nutrition. Parents also gave their perceptions on how their own health behaviors and the health behaviors of their children changed after enrolling in Head Start. The Health, Mental Health, Nutrition, and Parent Involvement Coordinators described health education strategies, activities, and topics. In addition, findings are presented from center-based meal observations. These observations allowed for an assessment, across programs, of how health education is incorporated into the everyday activities of the centers.

6.2 Findings

This section provides the findings from Head Start staff and parent reports regarding health education opportunities. Further information on parent and child health education

issues is provided in Volume III. Staff education issues are covered in Chapter 4: Program Staffing and Staff Qualifications, with additional comments presented in Volume III.

6.2.1 Health Education Provided to Children

Staff Reports of Health Education Topics. Health Coordinators provided information on the specific health topics covered in the classroom curricula. Based on their reports, topics such as nutrition (92.9%), personal hygiene (92.9%), first aid and safety (88.1%), and dental health (85.7%) were frequently or always presented to the children by most of the programs (see Exhibit 6-1). The Mental Health Coordinators indicated that self-esteem (94.6%) and peer relationships (89.2%) were the most common mental health education topics presented as part of the curriculum (See Exhibit 6-2).

Staff Reports of Health Education Activities in the Classroom. The Health, Mental Health, and Nutrition Coordinators each indicated whether items on lists of potential classroom activities (e.g., classroom discussions, role playing, movies, and videos) were included as part of the regular curriculum at their programs. Almost all of the respondents indicated that their programs incorporated these health and nutrition-related activities into their education program.

Exhibit 6-1 Health Topics Frequently or Always Addressed in the Classroom Curriculum as Reported by the Health Coordinators

Topic	Percent
Nutrition	92.9
Personal Hygiene	92.9
First Aid and Safety	88.1
Dental Health	85.7
Mental Health and Emotions	57.1
Physical and Mental Abuse	42.9
N	**42**

Exhibit 6-2 Mental Health Topics Frequently or Always Addressed in the Classroom Curriculum as Reported by the Mental Health Coordinators

Topic	Percent
Self-Esteem	94.6
Peer Relationships	89.2
Family Relationships	81.1
Dealing with Emotions	73.0
Racial and Ethnic Diversity	62.2
Child Abuse and Neglect	51.4
N	**37**

Classroom methods used to involve children in health-related activities were also reported by the Health and Mental Health Coordinators. The methods most commonly

reported by the Health and Mental Health Coordinators, respectively, were classroom discussions (100%, 94.6%) and role playing activities (97.6%, 83.8%). Having outside visitors come to the classrooms was an often employed strategy, both for presenting health information to children and for building linkages with the local community. The most frequent classroom visitors reported by the Health Coordinators were nurses (76.2%), nutritionists (66.7%), dentists (59.5%), psychologists (54.8%), and health educators (50.0%).

The Health and Nutrition Coordinators also reported on specific classroom activities. The responses of the former, found in Exhibit 6-3, indicate that many health-related activities, such as tooth brushing, hand washing, and talking about safety, occur within almost every program. The reports of nutrition activities were very consistent among the Nutrition Coordinators. As seen in Exhibit 6-4, each listed nutrition activity was identified as being used at 80% or more of the programs. Many activities, such as setting the table (100.0%) and cleaning up after the meals (100.0%), were ones easily incorporated into regular meal-related classroom activities.

When asked about specific materials that were available for use in health education activities, nearly all of the Health Coordinators reported that their classrooms contained books and pictures (100.0%), dramatic play materials (95.2%), large muscle equipment (95.2%), videos (90.5%), and manipulative toys (90.5%). Although not included on the data collection forms, it was observed in the field that some programs maintained resource centers containing adult and child health education materials (e.g, books, videos, manipulative materials, puppets) that were available for use by both staff and parents.

Exhibit 6-3 Health-Related Activities Included in Children's Educational Programs as Reported by the Health Coordinators

Activity	Percent
Washing Hands Before Meals	100.0
Talking About Good Nutrition and Healthy Foods	100.0
Talking About Safety in the Neighborhood or Playground	100.0
Supervised Tooth Brushing	97.6
Learning Good Grooming Habits	92.9
Talking About Safety at Home	90.5
Talking About Feelings and Friendships	81.0
Talking About the Use of Tobacco or Drugs	61.9
Talking About Disabilities	46.3
Talking About Physical and Dental Examinations	45.2
N	**42**

Exhibit 6-4 Nutrition-Related Activities Included in Children's Educational Programs as Reported by the Nutrition Coordinators

Activity	Percent
Setting the Table	100.0
Cleaning After Meals	100.0
Reading Books	94.9
Taking Field Trips	94.9
Preparing Food	94.9
Having Parties in the Classroom	92.3
Cooking Food	89.7
Serving Food	89.7
Planting and Growing Food	87.2
Shopping for Food	79.5
N	**39**

Parent Reports of Health Education Topics Discussed with Children. One feature of health education is the focus on increasing health knowledge to produce attitudes and behaviors related to good health. A very positive note was that 96.3% of the parents (N=1,145) reported discussing health topics and activities at home with their children during the Head Start program year. The topics discussed are listed in Exhibit 6-5. As shown, oral health, sanitary and grooming practices, safety, interpersonal relationships and good nutrition are the most frequently discussed topics, which are well matched to the classroom activities identified in Exhibit 6-3.

Exhibit 6-5 Topics of Parent-Child Discussions on Health-Related Activities at Head Start as Reported by the Parents

Topic	Percent*
Tooth Brushing	93.3
Washing Hands Before Meals	91.9
Safety at Home	90.6
Good Grooming Habits	87.5
Feelings and Friendships	86.8
Good Nutrition and Healthy Foods	85.8
Safety in the Neighborhood or Playground	85.1
Use of Tobacco or Drugs	77.9
Physical Activity and Fitness	73.3
Disabilities (Their Own, and Other People's)	65.8
N	**1,189**

*Percentages based on 1,189 parent reports; 1,145 parents (96.3 percent) indicated that they discussed health topics with their children

Parent Reports of Health Behavior Changes. More importantly, parents of Head Start children frequently reported that changes in health-related behaviors had occurred in their children, for themselves, or for both. Two thirds of the parents (N=791) reported that noticeable changes in their family's health behaviors could be identified since their child's enrollment in the program. Exhibit 6-6 shows, for each education topic, the percentage of children and parents who, based on the parents' reports, changed their health behaviors because of their experiences at Head Start. In addition to indicating the areas in which these changes occurred, parents also reported the types of changes that they noted in their children's or their own behaviors. The transcripts of the parents' responses to this question are included in Volume III.

Exhibit 6-6 Areas of Health Behavioral Changes Since Enrolling in Head Start as Reported by the Parents

Topic	Percent of Children*	Percent of Parents*
Tooth Brushing	52.0	21.7
Feelings and Friendships	44.6	22.6
Sanitary Practices	44.6	18.8
Good Grooming Habits	44.3	19.1
Good Nutrition and Healthy Foods	38.1	28.2
Safety at Home	37.2	22.9
Safety in the Neighborhood or Playground	34.5	21.3
Physical Activity and Fitness	27.7	17.4
Disabilities (Their Own and Other People's)	20.3	12.0

*Percentages based on 1,189 parents sampled; a total of 791 (66.5 percent) reported behavioral changes.

Parents most often mentioned an improvement in their children's tooth brushing behavior. This is particularly important in light of the expressed concern of Health Coordinators about the children's oral health (see Exhibit 5-8) and the results of dental examinations reported in Chapter 9: The Dental Health Domain. The areas where behavioral changes in children were reported by their parents include sanitary and grooming practices,

interpersonal relations (feelings and friendships), safety, and nutrition. Again, these areas are quite consistent with the health-related classroom activities reported by Head Start staff.

Parent behavior changes that were most frequently reported were in the areas of nutrition, safety, feelings and friendships, and oral health. It remains unclear from these reports how much of the parents' behavior change is due to formal parent education activities, informal discussions with Head Start staff, or the impact of children sharing the information at home, but each of these likely had some impact. One interesting result not noted in Exhibit 6-6 is that 10.7% of the parents reported that since entering Head Start their children had helped to change the health habits of other children and/or adults in their household.

Observations of Head Start Meals. In the daily routine of Head Start programs, meals provided the research staff with an opportunity to observe a common nutrition education activity across all of the study sites. The staff observed 177 meals, of which 58.3% were lunches, 24.6% were breakfasts, and 17.1% were snacks. Each meal was served to an average of 19.6 children (range = 6 to 162 children), and they were supervised by an average of 3.8 adults (range = 1 to 51 adults). The adults controlled the food servings at only 31.6% of the meals. Family style service, in which the children serve themselves, was used at 51.1% of the meals, and some combination of children and Head Start staff served the food at the remaining meals. If snacks are not included with the other meals, the percentages are similar, with children serving 53.1% of the meals and adults controlling the servings 25.2% of the time.

The purpose of observing meals was to note how programs incorporated health education activities into the regular classroom routine. Head Start staff sat with the children 97.2% of the time, and 87.6% of the time they ate with the children. This suggests a great opportunity for exchanging nutrition information with the children. At 61.4% of the meals, staff were observed providing children with information about the food on the table. The children were encouraged to eat the available foods 74.6% of the time, and were encouraged

by staff to taste specific foods at 77.7% of the meals. Many child-centered activities designed to encourage appropriate health behaviors among the children were observed before, during, and after the meals. The observations of these activities, summarized in Exhibit 6-7, show that washing hands (88.1%) and clearing the tables after meals (87.0%) were the most common activities that children engaged in at mealtimes. With the snacks removed from the totals, the percentages were virtually the same.

Exhibit 6-7 Activities Children Were Observed Participating in Around Meal Time/Snack Time

Activity	Percent*
Washing Hands	88.1
Clearing the Table After Meal	87.0
Cleaning Up	63.3
Setting the Table	59.3
Brushing Teeth**	52.5
Discussing Foods in Class Prior to the Meal**	29.9
Serving the Food to Others	23.7
Preparing the Food	1.7
Cooking the Food	0.6
N	**177*** **

*Percent of meals at which research staff observed the activity.
**Staff was not always able to observe whether or not this activity occurred.
***N=the number of observed meals.

Whether or not snacks were included, children were observed brushing their teeth after less than 60% of the meals. While many Head Start classrooms have facilities for the children to brush their teeth in the classroom, this was not always the case. Because the data collectors were instructed to include only behaviors that they actually observed, certain behaviors, such as tooth brushing, may be under-reported. Although a higher percentage was

expected, it is noted that this particular activity is recommended, but not required, under the Program Performance Standards.

6.2.2 Health Education Provided to Parents

Each Head Start program carries out a series of activities directed towards the parents of enrolled children. These activities are designed to empower parents and to facilitate their efforts to interact with their children in appropriate ways. Across the 40 study sites, 97.6% of the Parent Involvement Coordinators reported that program-sponsored activities were available for parents. The one respondent answering "no" on this issue did, however, report positively about parent education activities earlier in the interview. While health education can be provided through a variety of methods (e.g., workshops, field trips, parent-child activities), such activities are referred to as parent classes in this report.

Parent Reports of Education Topics. The parent reports on specific topics that Head Start covered in parent education activities are presented in Exhibit 6-8. The range of topics covered parenting, child development, and the linking of families to health services in the community as well as specific health-related topics. The education topics most frequently reported were parenting (83.3%), child growth and development (82.8%), and nutrition and meal planning (80.8%). These figures do not, however, provide an indication of the extent of parents' participation in these activities. Fittingly, a number of the topics cited by the parents address issues such as injuries, immunizations, and health risk factors, which are discussed in later chapters of this report.

Exhibit 6-8 Topics for Activities and Educational Information Presented by Head Start as Reported by the Parents

Topic Area	Percent
Parenting	83.3
Understanding Child Growth and Development	82.8
Nutrition and Meal Planning	80.8
Safety in the Home	78.1
"Helping Agencies" in the Community	75.0
Preventive Medical and Dental Care for Family Members	73.7
Physical Fitness	70.0
Substance Abuse	67.0
First Aid	66.2
Domestic Violence	64.0
Medical and Dental Care for Family Members Needing Services	56.5
N	**1,189**

Staff Reports on Parent Education. A primary responsibility of the Parent Involvement Coordinator is to develop parent education programs. The frequency with which such classes were offered varied greatly across the programs studied. According to the Parent Involvement Coordinator reports, 26.2% of the programs held classes once a week or more, 14.3% held classes only once a week, 42.9% held them less than once a week but at least every month, and 9.5% offered classes less than once a month.

Staff reports of the health-related topics covered by the Head Start-sponsored classes varied by staff position. Some individual items were not included on the interview forms for all of the staff positions (e.g., Mental Health Coordinators were not asked about cooking classes). However, the items presented in Exhibit 6-9 include additional topics mentioned by specific staff. Most staff, regardless of their position, agreed that their programs offered classes covering parenting, child growth and development, domestic violence (including child

abuse and neglect), discipline, and health risk factors. The first three of these are consistent with the parent reports on the education activities (see Exhibit 6-8) and with the specific health risk factors identified by staff (see Exhibit 5-10).

Exhibit 6-9 Parent Education Topics as Reported by Staff

	Percent		
Service	**Health Coordinators**	**Mental Health Coordinators**	**Center Directors**
Nutrition	97.6	—	90.5
Health Education	95.2	—	95.2
Immunizations	92.9	—	78.6
Parenting	88.1	89.2	95.2
Preventive Health Care	88.1	—	85.7
Safety	85.7	—	88.1
First Aid	85.7	—	85.7
Child Abuse and Neglect	83.3	92.1	85.7
Child Growth and Development	81.1	83.8	90.5
Family/Domestic Violence	81.1	75.7	76.2
Discipline	78.6	89.2	85.7
Cooking	61.9	—	42.9
Health Risk Factors	54.8	67.6	71.4
Fitness	35.7	—	50.8
Sex Education/HIV	2.4	—	—
Mental Health Orientation	—	13.5	—
Stress Management	—	10.8	—
Substance Abuse	—	8.1	—
N	**42**	**37**	**59**

Note: — indicates that responses for this item were not obtained from that staff position.

6.3 Summary

One way to consider the impact of Head Start is to understand how children and their families become better prepared to meet the challenges of improving their health and lifestyles after they leave Head Start. This is the goal of Head Start health education. The major findings of this chapter are summarized below.

- Nutrition, personal hygiene, first aid and safety, and dental health were the health education topics discussed most by Health Coordinators. Mental Health Coordinators were most likely to list self-esteem and peer relationships as mental health topics covered in the classroom curriculum.

- Both Health and Mental Health Coordinators listed classroom discussions and role playing activities as the most named classroom activities used to incorporate health education into the classroom. Classroom visitors also were noted as an important education activity.

- Almost all of the parents stated that they discussed health topics at home with their children.

- Changes in either child or adult health behaviors after entering Head Start were noted by two thirds of the parents. Over a quarter of the parents and almost half of the children were described as having some general improvement in their health behavior. One tenth of the parents felt they had an increased awareness of the health behaviors of their children. Over 40% of the parents reported that their children engaged in proper health behaviors more frequently and were more aware of the impact of their own behaviors.

- One tenth of the parents indicated that their children helped change the health behavior of other children or adults in their home.

- Most of the Head Start staff sat and ate with the children during mealtimes. At most of the meals, children were observed washing their hands before meals and clearing tables at the end of meals.

- Nearly all of the programs offer parent classes, according to the Parent Involvement Coordinators. Classes were held at least once a week by a quarter of the programs, and less than once a month by approximately 10% of the programs.

- Parent education topics most reported by parents included parenting, child growth and development, and nutrition and meal planning.

- Based on the percentages reported by staff and parents, health education activities are a regular part of Head Start programs. Education is part of the active role Head Start takes in preparing families to engage in preventive care and to seek health services as needed.

7.0 IMMUNIZATIONS

7.1 Overview

Over the past 40 years, immunization has proven its effectiveness as a disease prevention measure. By 1994, infectious diseases that had affected hundreds of thousands of individuals in 1954, such as polio, measles, mumps and pertussis, were virtually non-existent. As shown in Exhibit 7-1, 2,508 cases of diseases preventable by immunization were reported in children under 5 years of age in 1994. While these represent historic lows, public health providers continue to be vigilant in pressing for the complete immunization of infants, children, and adults to prevent the reemergence of preventable diseases. For Head Start, the Program Performance Standards specify that children 4 to 6 years of age and leaving Head Start to enter kindergarten or first grade should have received all of their age-appropriate immunizations (§ 1304.3-4).

However, the requirements for the complete immunization of 4-year-old children have only recently been clarified. Beginning as early as 1983 and continuing through the 1993-94 Head Start program year, the Program Information Report (PIR) required 4 administrations of diphtheria, pertussis, and tetanus (DPT), 3 administrations of oral polio vaccine (OPV), 1 of measles, mumps, and rubella (MMR), and 1 *haemophilus influenzae* type b (Hib) (referred to as "4-3-1-1") for a preschool child to be fully immunized. National advisory groups (including the American Academy of Pediatrics (AAP), the Advisory Committee on Immunization Practices (ACIP), and the Centers for Disease Control and Prevention (CDC)) have long recommended that a fifth DPT and a fourth OPV be administered between the ages of 4 and 6. The intent of this recommendation is to provide "booster" shots for children prior to their entrance into school. In 1988, the Head Start Bureau issued Information Memorandum (IM) 88-16, specifying immunization recommendations for 4 to 6 year old children. The IM specified that a 4-year-old child who had received 5 administrations of DPT,

4 administrations of OPT, 1 of MMR, and 1 Hib vaccine administration (referred to as "5-4-1-1") prior to completion of Head Start was considered completely immunized. While the Head Start immunization requirements for

Exhibit 7-1 Incidence of Vaccine-Preventable Diseases in the United States in 1993-94 (Children Under 5 Years of Age)

Disease	1993	1994
Diphtheria	0	1
Pertussis	3,398	1,704
Tetanus	0	0
Mumps	245	198
Measles	114	211
Rubella	31	21
Polio	1	1
Haemophilus Influenzae type b	379	266
Hepatitis B	120	106

Source: Centers for Disease Control MMWR, April 14, 1995

children in transition from Head Start to school were consistent with the recommendations of the AAP, they were also more stringent in that the standards were to be met before leaving Head Start, rather than before the child turns 7 years of age. The 1988 Head Start requirements (IM 88-16) were in effect during data collection for the Descriptive Study of the Head Start Health Component. In July 1994, the Head Start Bureau issued IM 94-13. This IM updated and made the program's immunization schedule consistent with the schedule recommended by national advisory bodies such as the AAP. It is important to note that this

Head Start update was released after the completion of the data collection for this study.[1] A historical summary of recent immunization requirements is found in Exhibit 7-2.

Exhibit 7-2 Summary of Immunization Requirements for 4-Year-Old Children

	DPT	OPV	MMR	Hib	HepB
Head Start PIR reporting guidelines (1983)	4	3	1	1	0
AAP/ACIP/CDC (1986)*	5	4	1	1	0
Head Start Program Performance Standards/Information Memorandum 88-16 (1988)	5	4	1	1	0
State School Requirements (including Washington, D.C.) (1992)	3 (18)** 4 (28) 5 (5)	3 (35) 4 (16)	2 (19)*** 1 (32)	0 (12) 1+(39)	0 (51)
Head Start PIR and Program Performance Standards/Information Memorandum 94-13 (1994)	5	4	1 or 2	3 or 4	3+
AAP/ACIP/CDC (1994)*	5	4	1 or 2	3 or 4	3+

* American Academy of Pediatrics/American Committee on Immunization Practices/Centers for Disease Control

** Number in parentheses indicates the number of States requiring specified numbers of immunizations

*** "Recommended" rather than "required" for entry into kindergarten

Since 1989, organizations advising the nation regarding immunization practices have updated their guidelines several times, expanding the recommendations to include additional vaccines and additional administrations of previously listed vaccines. The AAP, the ACIP, and the CDC jointly published a consolidated immunization schedule in January 1995. For children 4 to 6 years of age (that is, prior to entry into kindergarten or first grade), the joint

[1] Both Head Start IM 88-16 and IM 94-13 include catch-up schedules for under-immunized children entering Head Start. In the present study, that schedule was applicable to only a small proportion (1.9%) of the children whose parents were interviewed.

recommendations included 5 DPT, 4 OPV, 2 MMR, 3 Hib, and 3 Hepatitis B (HepB) vaccine administrations. These recommendations are identical to those required by Head Start IM 94-13.

Thus, the Head Start programs presently have immunization guidelines that are consistent with, but somewhat more stringent than, the recommendations of national advisory groups. At the point of data collection for this study, two additional sources of advice provided conflicting guidance to Head Start staff regarding complete immunizations for 4-year-old children. First, as noted in Exhibit 7-2, individual State requirements for entrance into kindergarten were generally less stringent than the Head Start requirements. In a survey completed by the CDC in 1992, the majority of States required 4 or fewer DPT and 3 or fewer OPV for school entrance. Second, as noted in Exhibit 7-2, the Program Information Report (PIR) reporting requirements through 1993-94 employed the "4-3-1-1" standard (beginning in the 1994-95 year, those requirements were modified to reflect Head Start IM 94-13). Throughout the 1990s, the combined PIRs from all of the Head Start programs indicated that well over 85% of the children were fully immunized according to the "4-3-1-1" criterion. That criterion was, and remains, consistent with national advisory group recommendations for 3-year-old children.

A study conducted in 1992 and published in 1993 by the Office of the Inspector General (OIG) found that, although the PIR percentages were generally accurate in terms of the PIR reporting requirements, a far lower proportion of Head Start children were actually fully immunized when the 1988 Head Start IM 88-16 criteria were applied. That is, only 43.5% of all children (including both 3- and 4-year-olds) were found to be immunized at the levels required by the Program Performance Standards based on reviews of child health files completed near the end of the 1992 school year. For the OIG study, a large majority of children who were not fully immunized were missing only the fifth DPT and/or the fourth OPV, which are required by Head Start for children 4 years and older before they leave the program.

One variable that does impact on the rate of immunization in certain areas is the current cost of each vaccine. The costs for public and private sources of the vaccine are shown in Exhibit 7-3. The significantly higher cost of the DTP vaccine across multiple administrations may be a factor in the varying requirements of different jurisdictions.

Exhibit 7-3 Prices of Vaccines to Fully Vaccinate a Child in 1995

	Per Dose: Public Cost*	Per Dose: Private Cost
DTP/HIB	$14.60	$27.78
OPV	2.27	11.64
MMR	16.00	25.87
HIB	4.76	15.37
Hep B	7.72	16.17

*Cost includes per dose excise tax.
Note: Table information was provided at the 1996 National Immunization Conference sponsored by the CDC (CDC, 1996).

This chapter presents immunization rates for the 4-year-old children in the study sample relative to immunization data obtained from other Head Start-based reports. Rather than simply evaluating immunization rates to estimate compliance with the Program Performance Standards, a primary focus has been to explore differences across multiple sources of immunization information in order to establish whether or not problems exist in obtaining, recording, and/or reporting immunizations or if there are other areas of concern that should be addressed to assure that the immunizations of Head Start children meet program expectations.

7.2 Findings

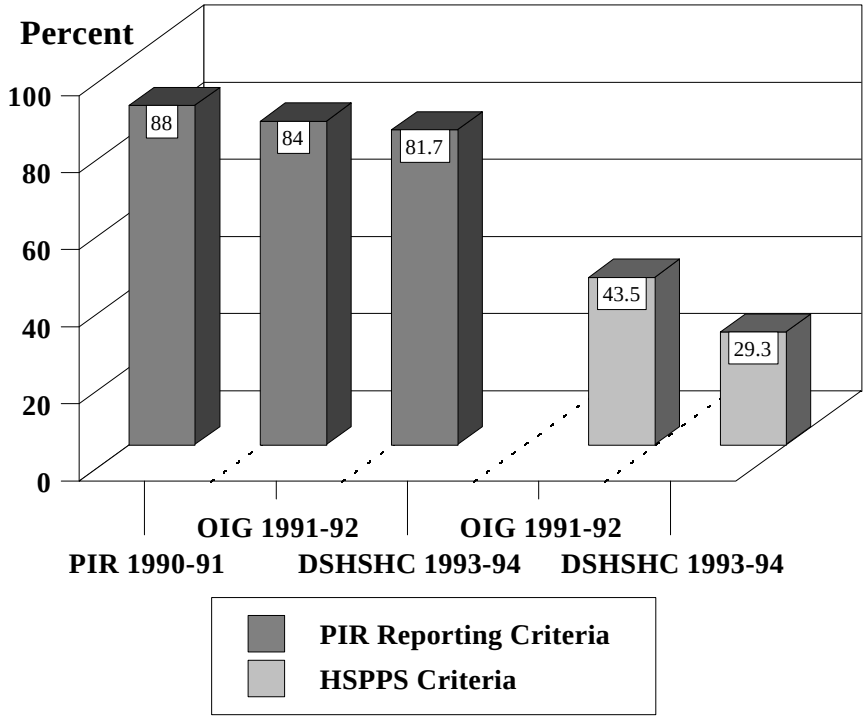
7.2.1 Head Start Child Health Records

The present study found, for 4-year-old children, that 81.7% of the children met the PIR reporting requirements, a similar percentage to that reported by the OIG and the Head Start PIRs (See Exhibit 7-4).[2] However, only 29.3% of the immunization records reviewed met the requirements of the 1988 Head Start immunization policy. As with the OIG study, the primary problem in meeting Head Start performance criteria was associated with the additional DPT and OPV immunizations required for children past their fourth birthdays.[3] Exhibit 7-5 shows the percentage of 4-year-old children with 4 or with 5 or more DPT immunizations and the percentage with 3 or with 4 or more administrations of OPV. As shown, the final DPT and OPV immunizations were not administered to a substantial number of 4-year-old children.

[2] The Head Start PIR data has remained in the range of 88-90 percent range since 1990-91 (the year in which the OIG study was initiated).

[3] The percentage provided in the OIG study may have been higher due to the fact that it included an unspecified number of 3-year-old children who would not be affected by the requirement for additional DPT and OPV immunizations.

Exhibit 7-4 Percentage of Fully Immunized Children Across Three Databases

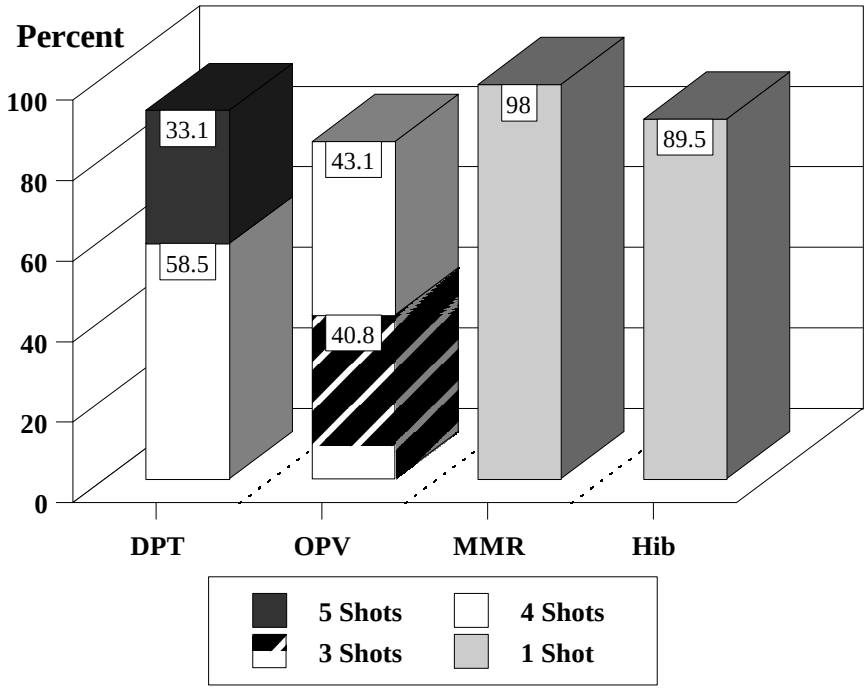


P

PIR Reporting Criteria: DPT≥4, OPV≥3, MMR≥1, and Hib≥1
HSPPS Criteria: DPT≥5, OPV≥4, MMR≥1, and Hib≥1

PIR - Head Start Program Information Report
OIG - Office of the Inspector General
DSHSHC - A Descriptive Study of the Head Start Health Component
HSPPS - Head Start Program Performance Standards

Exhibit 7-5 Percentage of 4-Year-Old Children with DPT, OPV, MMR, and Hib Immunizations as Noted in the Child Health Records



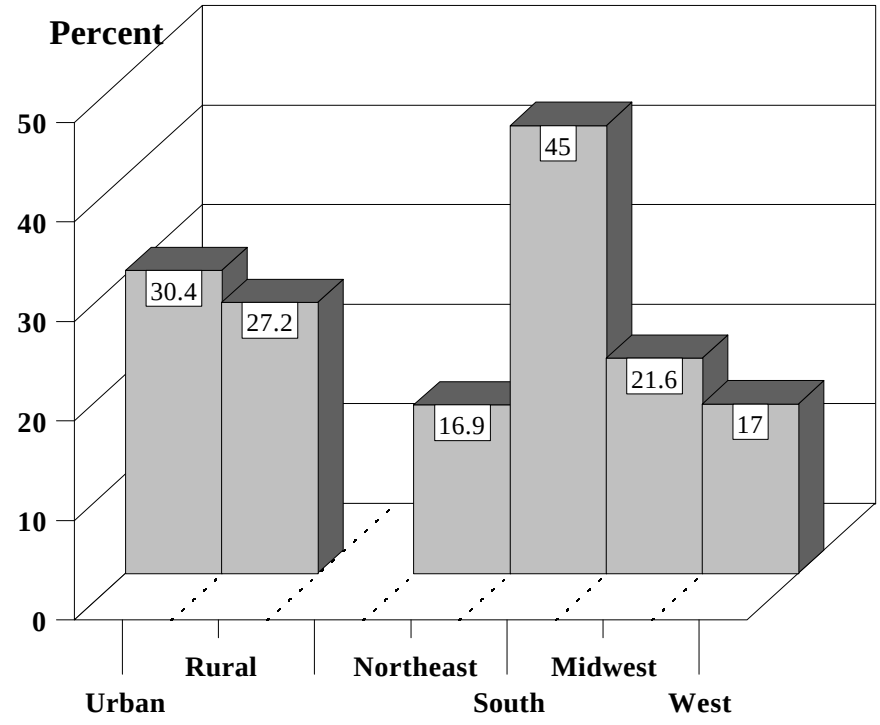
The total number of immunizations received by 4-year-olds was analyzed as a proportion of those required under the 1988 criteria (5-4-1-1=11). The results showed that children had received 82.8% of the required immunizations. This translates to children having received 9 of the 11 required immunizations at the time of the study. The implication of this percentage is that Head Start children are not severely under-immunized. Rather, as reported by the OIG and as confirmed in the present study, those who are not fully immunized are usually missing only one or two administrations, and these are almost always the fifth DPT and/or the fourth OPV required after the fourth birthday. Actual occurrences of health conditions associated with the lack of these immunizations were not apparent in the review of health conditions from either the parent interviews or the child health files.

The proportion of fully immunized children was similar for both urban and rural Head Start programs (see Exhibit 7-6). However, there was a large difference between geographic regions. As shown in Exhibit 7-6, children attending programs in the South appeared far more likely (45.0%), and those in the Northeast less likely (16.9%), to be fully immunized (χ^2=95.53; $p \leq 0.0001$; for unweighted data). An examination of program-by-program data revealed that this result was generalized across Head Start programs, insofar as nine of the ten highest full-immunization rates by program were found for programs in the Southern region.

7.2.2 Parent-Provided Immunization Records

The design of the study allowed for an examination of the factors that might contribute to the relatively low proportion of 4-year-old children found to be completely immunized based on the 1988 requirements. For this study, parents were asked to bring copies of their child's immunization records to their interviews. Approximately 35% (n=411) of the parents with 4-year-old children did so. While it is not known how well such parents represented the entire Head Start sample, a comparison of the records provided by these parents and those found in the child health files (see Exhibit 7-7) revealed that 16.8% of the children had additional DPT immunizations recorded on the records provided by the parents and that 8.9% of the parent records recorded additional OPV immunizations. This finding raised the possibility that Head Start records were not being systematically updated during the school year. Additional analyses determined that, if the parent records that were available were considered in evaluating the 4-3-1-1 standard, the percentage of 4-year old children achieving that standard was 87.3 percent. A recently reported national survey completed by the CDC found that only 75% of preschool children had been immunized at that level (MMWR, February, 1996).

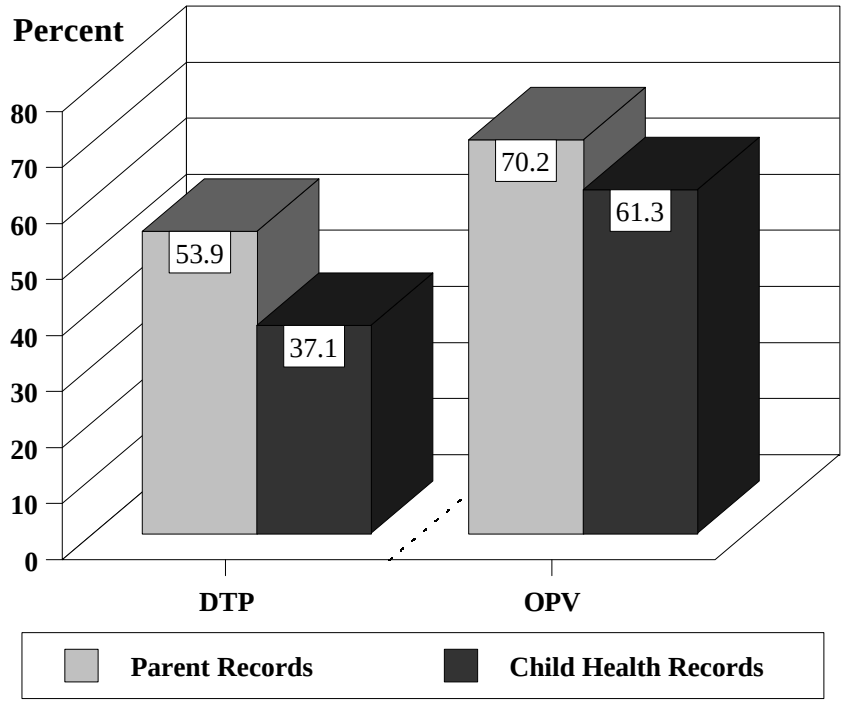
Exhibit 7-6 Percentage of Fully Immunized* 4-Year-Old Children By Urbanicity and Geographic Location of the Program



*Criteria: DPT≥5, OPV≥4, MMR≥1, and Hib≥1
Source: Child Health Record

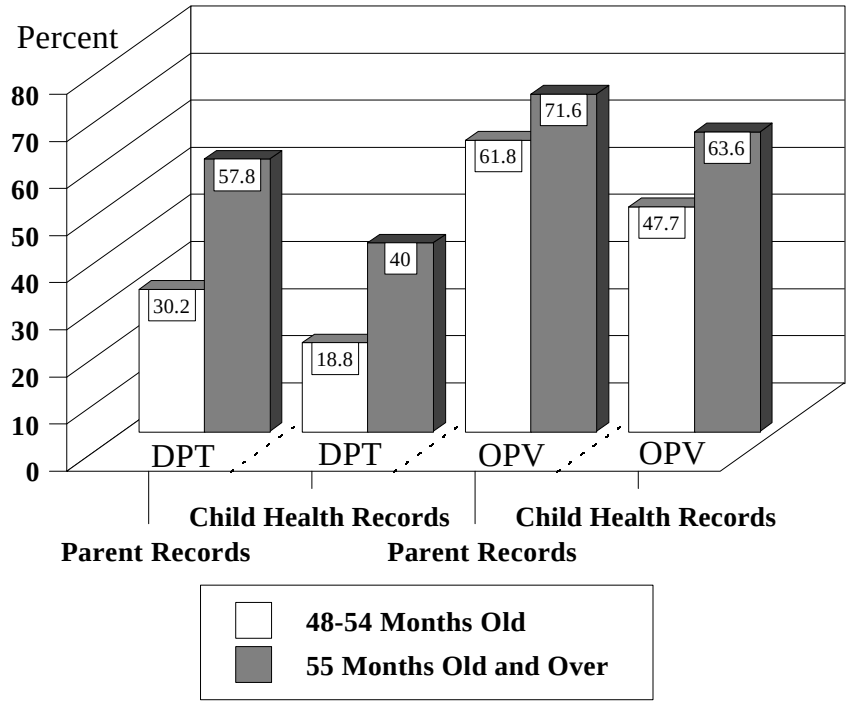
The number of children meeting the 5-4-1-1 requirement was also checked using combined data from the parent-held records and the health files. It was found that the percentage of children meeting this requirement increased to 37.1%, as opposed to the 29.3% noted in the health records only.

Exhibit 7-7 Percentage of Children Fully Immunized as Noted in the Parent Records and the Child Health Records



Further, when comparing information on those children who had recently turned 4 years old and those who had been 4 for 6 months or more (see Exhibit 7-8), the older children were systematically more likely to have received their fifth DPT and fourth OPV immunizations. This suggests that the problem is, to some degree, administrative, and that the systematic review and updating of immunizations at children's fourth birthdays might significantly increase the proportion of those whose records show them to be fully immunized.

Exhibit 7-8 Percentage of 4-Year-Old Children with 5 DPT and 4 OPV Immunizations as Reported on the Parent's Immunization Records and in the Child Health Records.



Note: n-411 for parents who brought an immunization record to the interview;
n=357 for children over 54 ;months of age;
n=54 for children between 48 and 54 months of age.

7.2.3 Health Coordinators' Knowledge of Immunization Requirements

During interviews with the Health Coordinators, the respondents discussed their understanding of the requirements for the full immunization of 4-year-old children. They reported which immunizations were required for 4-year-old children and how many administrations were required. For DPT, only 9.5% of the Health Coordinators reported that five administrations were required; for OPV, only 26.2% accurately stated the requirement for four administrations (see Exhibit 7-9). The source of confusion on this issue might be traced to the more lenient State school immunization requirements, the PIR reporting requirements, or both. However, no statistical association was found between individual State requirements

and the Health Coordinators' reports. Nor were there any relationships between the Health Coordinators' reports and educational qualifications, program size or auspice.

It is important to note that the responsibility for ensuring that 4-year-old children completing Head Start are immunized at the nationally-recommended level for school entrance is generally that of the Parent Involvement Coordinator. As indicated earlier in Exhibit 5-10, the most frequently reported health risk factor reported by the Parent Involvement Coordinators was the lack of immunizations, while other Health Component staff identified other risk factors far more often. Nevertheless, additional clarification and consistent information regarding the immunization of children after their fourth birthdays would improve the understanding of key Head Start staff regarding program responsibilities for immunization.[4]

Exhibit 7-9 DPT and OPV Immunization Requirements for 4-Year-Old Children as Reported by the Health Coordinators

DPT Requirements			OPV Requirements		
Requirement	**n**	**Percent**	**Requirement**	**n**	**Percent**
5 immunizations	4	9.5	4 immunizations	11	26.2
4 immunizations	28	66.7	3 immunizations	23	54.8
Fewer than 4 immunizations	2	4.8	Fewer than 3 immunizations	0	0.0
Don't know/missing	2	4.8	Don't know/missing	8	19.0

Updated Requirements. Since the data were collected for this study, the Head Start Bureau has updated the immunization requirements for children attending the program and has modified the PIR reporting requirements to be consistent with current immunization

[4] The revised Head Start Program Performance Standards currently may provide local Head Start programs with some flexibility with regard to immunization requirements.

requirements.[5] The new requirements significantly increase the number and types of vaccine administrations required for children at all ages (and may be subject to further change in the near future if a vaccine for varicella zoster—chicken pox—is recommended nationally). Given that the new schedule is more intensive, more complex, and may be in conflict with State regulations, assurances that key program staff are aware of and understand program responsibilities regarding immunization is increasingly important. In addition, systems to ensure that immunizations are reviewed, made current, and recorded in program health records during the school year would increase reported compliance with current Head Start immunization standards.

[5] Also, revised Head Start Program Performance Standards for immunization are currently in development.

7.3 Summary

Under the Program Performance Standards, programs are required to obtain or provide services to assure that age-appropriate immunizations are provided for children before the end of the Head Start year (§ 1304.3-4). Recent studies, based on data from the child health files, have reported that updating childhood immunizations remains a critical concern at many programs. This chapter suggests that, based on data from multiple sources, there may be several reasons for problems identified relative to immunizations, some of which may be relatively easy to address. The major findings of this chapter are summarized below.

- Immunization rates based on the children's health record review showed that over four fifths (82%) of the 4-year-old children were fully immunized in accordance with the PIR reporting requirements.

- A review of the children's health records showed that less than one third of the 4-year-old children in the study were fully immunized according to the Head Start immunization policy (5-4-1-1) which was in effect at the time of the data collection. This percentage increased to over 37% when parent held records and the information in the health files were combined.

- Children attending Head Start programs in the South were twice as likely to be fully immunized as children from programs located in other regions of the country.

- For the sub-sample of children whose parents provided copies of the children's immunization records, a substantial proportion of the children had additional DPT and OPV immunizations noted on the parent records that were not recorded in their Head Start child health files.

- Overall the children had over 82% of their immunizations, with the 5th DPT and the 4th OPV being the most likely missing shots.

- Fewer than one tenth of the Health Coordinators reported accurately that 5 DPT immunizations were necessary for a 4-year-old child to be considered fully immunized and only one quarter correctly noted that 4 OPV vaccinations were also required.

8.0 THE MEDICAL HEALTH DOMAIN

8.1 Overview

Overall, the health of the Nation's children has improved in recent decades. Promising statistics include a reduction in infant and child mortality rates and a reduced incidence of preventable childhood diseases. However, poverty continues to have a pervasive effect on the health of children. Children from low-income families are likely to encounter more health risk factors and, when they do become ill, they get sicker and they die at higher rates than other children (Starfield, 1992).

Recently, attention has focused on health conditions related to the physical and social environment. These conditions include asthma, tuberculosis, lead poisoning, infection with human immunodeficiency virus (HIV) or other sexually transmitted diseases (STDs) during birth, and conditions related to maternal behavior during pregnancy. Other health conditions, such as physical injuries and behavioral/emotional problems, may result from stress caused by primary or secondary exposure to community violence. These conditions present challenges for Head Start providers. Except in severe cases or acute stages, the behavioral manifestations of asthma, tuberculosis, lead poisoning, HIV infection, STDs, and fetal drug and alcohol syndromes are subtle, but often treatable. These include aggressive behavior, hyperactivity, and attention deficit disorders. These problems can be particularly disruptive to an individual child's learning and can interfere with the learning experiences of classmates as well (AOA, 1994).

Head Start plays a significant role in working with families to ensure that children receive regular medical screenings and examinations. The Head Start program requirements for medical screenings and examinations are detailed in the Program Performance Standards (§1304.3-3). Screenings and examinations may take place at Head Start centers or Head Start

staff may assist families in scheduling appointments with community health providers. To fulfill the requirements of the Program Performance Standards, Head Start children are first screened for all of the health conditions covered by these Standards in order to provide a preliminary indication of any health problems. These screenings include: growth assessment (height, weight, and age), vision testing, hearing testing, hemoglobin and hematocrit determinations, tuberculin (TB) testing where indicated, urinalysis, assessment of current immunization status, and, based on community health problems, other selected screenings where appropriate (e.g., sickle cell anemia, lead poisoning, and intestinal parasites). The Program Performance Standards guidance suggests that some of the screening activities may be performed by non-professional workers who are trained in these areas (§1304.3-3). These screening activities include collecting medical and dental health histories, growth assessments, immunization status assessments, and vision, hearing, and speech screenings. The physical examinations must be carried out by trained professionals. The primary source of support for screening and examination services for Head Start children is Medicaid (see Chapter 2: Historical Context of the Health Component).

Only a few studies have focused on the impact of Head Start on health screenings and examinations for children. Fosburg (1984) examined the Head Start health services delivery system and the outcomes it produces on the health status of the children served by Head Start, compared to the health status of non-Head Start children. Head Start children were more likely to receive a medical examination than non-Head Start children (86% vs. 68%), and more Head Start children received additional preventive health services such as TB tests (67% vs. 42%) and lead tests (15% vs. 8%).

Hale, Seitz, and Zigler (1990) examined the medical records of 40 children enrolled in Head Start, 18 low-income children on a Head Start waiting list, and 20 children in a nursery school serving middle-class families. These groups of children were compared with regard to health screenings and their medical records were examined for immunizations and pediatric checkups since birth. Currently enrolled Head Start children were more likely than the

waiting-list and middle-class children to receive age-appropriate health screenings ($p<0.01$ for each comparison). The Head Start children were also significantly more likely than the waiting-list children to be screened for high lead levels, anemia, tuberculosis, high blood pressure, loss of hearing, and loss of vision. The Head Start children exceeded the middle-class children in receiving TB tests, blood pressure measurements, and hearing and vision screenings. Thus, it appears that, for these low-income children, the formal Head Start health services delivery system made an important difference in their receipt of preventive care (Zigler et al., 1994).

An understanding of the health conditions of Head Start children which Head Start program staff must address is an important step in examining the patterns of delivery and the use of health care services by these children. This chapter discusses health conditions noted for children in the study sample obtained from both the parents' interviews and the child health files.

Subsequent to finding health conditions during medical screenings and examinations, the Program Performance Standards require that programs provide or arrange for treatment services where necessary (§1304.3-4). Each Head Start program is responsible for developing a plan to assure treatment and follow-up services. Usually, this plan requires that a person on staff assume the role of assuring that identified health conditions actually receive competent and continuing care until the conditions are remedied or until a pattern of continuing care has been well established. Head Start staff assist parents in securing the necessary services and in identifying funding sources to pay for the services.

Recently, Brush et al. (1993) examined the quality of Head Start's comprehensive services using resident Head Start databases (the Program Information Report (PIR) and the On-Site Program Review Instrument (OSPRI)). They found that most grantees deliver extensive services and meet nearly all of the Performance Standards. Based on the 1992 PIR

data, Brush found that medical treatment was provided to a mean of 97% of the children needing it across the reporting programs.

Unlike the PIR, which is self-reported, the OSPRI data are dependent on reviews conducted on-site by an independent team of visitors. The OSPRI results from 1991 to 1993 indicate that most grantees are meeting the medical needs of a high percentage of enrolled children (80% or more), but that a significant number of grantees are unable to match that performance each year. The number of grantees not obtaining screenings and services for at least 80% of the children appeared to be increasing (Brush et al., 1993).

8.2 Findings

This chapter presents unweighted data obtained from staff interviews. Also, because of the interest in having national estimates of the health status of Head Start children, the percentages for (see Chapter 3: Methodology) parent reports and the review of child health files were weighted. Where available, similar data for 4-year-olds are presented from the 1991 National Health Interview Survey (NHIS), Child Health Supplement (National Center for Health Statistics, 1993). The majority of the child health files provided data on the results of specific health tests and measurements that took place during the health screenings.

8.2.1 Staff Reports of Perceived Health Problems

All of the Health Coordinators and Center Directors were asked to report on the three most serious health conditions their programs faced during the current program year. Similarly, the Mental Health Coordinators reported on the three most serious mental health conditions that their program confronted during the past year. The question asked was:

- Please tell me the three most serious child health/mental health problems that your program has had to address since September 1993.

Staff responses were based on recall; the respondents did not have the opportunity to review records or reports prior to providing their answers. All of the responses were coded into categories similar to those used with the child-level health condition data. Because these are not child-level reports, the staff reports of health problems are presented separately from the actual child data.

The reports provided by the Health Coordinators and Center Directors had interesting similarities and differences. Exhibit 8-1 provides lists of the health conditions most often reported by the Center Directors and Health Coordinators. These lists shared some common concerns, such as lice, asthma, dental and other oral health problems, and childhood illnesses (e.g., measles, chicken pox). However, more than 20% of the Health Coordinators also mentioned blood disorders and more than 10% mentioned malnutrition, while neither problem was on the list of conditions reported by the Center Directors. Dental conditions were named by just under 50% of the Health Coordinators and by only 25% of the Center Directors. On the other hand, Center Directors placed childhood illnesses and lice at the very top of their list (27.8% for each), while 18.0% mentioned the flu and colds as being serious problems. The latter condition was not listed by the Health Coordinators. While the Health Coordinators were likely to focus on problems that place demands on program resources (e.g., arranging screenings and treatments, securing funding), the Center Directors were more likely to report health problems, such as colds, flu, and lice, which have a significant impact on classroom activities and attendance.

Exhibit 8-1 The Most Serious Health Conditions as Reported by the Health Coordinators and the Center Directors

Health Coordinators (N=42)		Center Directors (N=59)	
Condition	**Percent**	**Condition**	**Percent**
Dental/Oral Health Problems	48.2	Childhood Illnesses (e.g., Chicken Pox, Measles)	27.8
Asthma	23.2	Lice	27.8
Blood Disorders	23.2	Dental/Oral Health Problems	25.0
Lice	19.6	Flu/Colds	18.1
Childhood Illnesses (e.g., Chicken Pox, Measles)	16.1	Asthma	11.5
Malnutrition	12.5	Lack of Immunizations	11.5
Hearing Problems	10.7	Speech/Language Problems	11.5
Lack of Immunizations	10.7	Hyperactivity/ADD	9.7
Lead	8.9	Gastrointestinal Problems	8.3
Vision Problems	8.9	Hearing Problems	8.3
Effects of Substance Abuse	7.1	Physical/Sexual Abuse	8.3

8.2.2 Health Histories and Child Health Files

Health Histories. Center Directors and Health Coordinators were asked how often the following sources of information were used to obtain health histories: written records from previous health providers, interviews/oral histories from parents, written histories from parents, and immunization records. The Health Coordinators and Center Directors both reported that they used immunization records frequently or always (100.0% and 95.2%, respectively) as well as interviews or oral histories from the parents (95.0% and 90.5% respectively).

Child Health Files. The Center Directors were asked who had the primary responsibility for ensuring that the health records were reviewed and that the information was

up-to-date when a child first enrolled in Head Start. Most commonly, the Health Coordinators (37.3%), Family Service Workers (20.3%), or Center Directors (16.9%) had this responsibility.

The Health Coordinators reported that 88.1% of the programs completed a Head Start Child Health Record for all children, and that 52.4% of the programs used another standard form in the children's health files, either by itself or accompanied by the Head Start Child Health Record. This finding is in contrast to the data shown in Chapter 3: Methodology, where only 58.2% of the child health files reviewed in this study used the Head Start Child Health Record forms. Health Coordinators may not have been clear as to what actually comprises Health Record. For example, sometimes programs used outdated versions of the form. While researchers expected the official, current version of the Head Start Child Health Record, Health Component staff were reporting on locally designed forms or on an edited version of the current Head Start Record that they refer to as the Head Start Health Record.

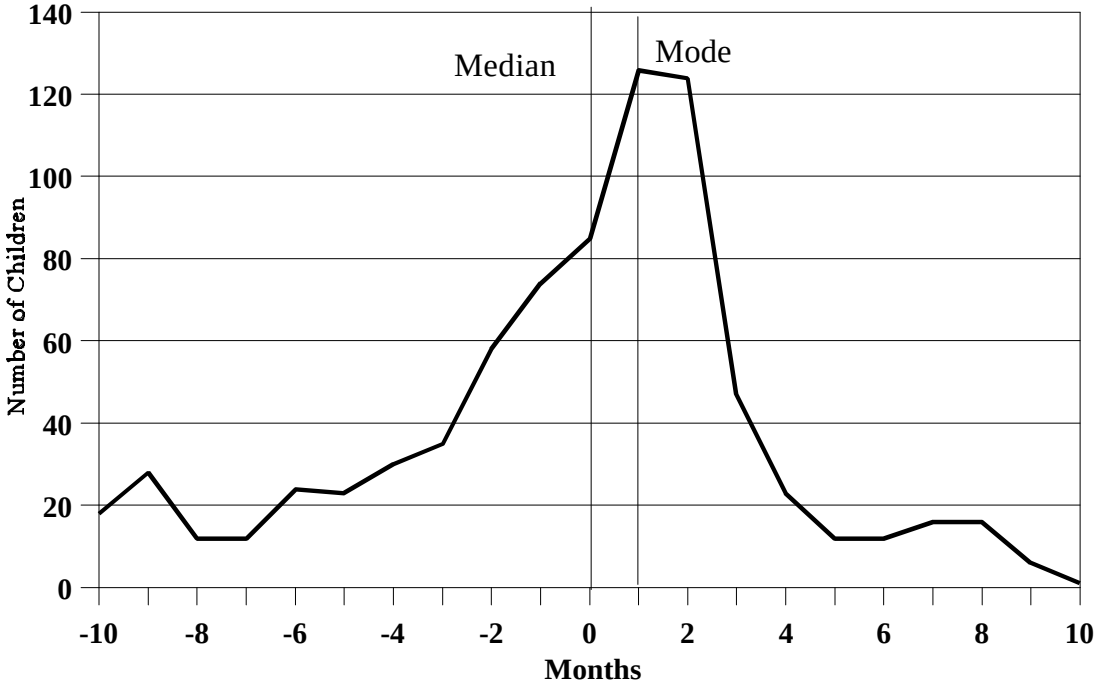
8.2.3 Timing and Methods of Completing Physical Examinations

Timing of the Physical Examinations. The Program Performance Standards require that an undressed physical examination/assessment be performed every two years beginning at age three (§1304.3-3). However, physical examinations and hearing and vision tests need not be performed for enrolled children who have had these examinations within the required schedule, provided that the program has records of the results.

The dates of enrollment and participation in Head Start services vary greatly among the study children. Since a date for the initiation of Head Start-related activities could not be determined consistently across the records of the children included in this study, a single date of July 1993 was chosen as a standard reference point against which to compare examination dates for all children. This date was chosen because it is just before the beginning of the Head Start program year, a time when Head Start staff are already working with parents to prepare children to enter the program. Exhibit 8-2 shows the distribution of physical examination

dates relative to July 1993. These examination dates were abstracted from the children's health records. The median month for physical examinations was July, while the mode was at one month after July. Usually during thesemonths Head Start staff are working with parents to ensure a smooth transition into the Head Start year and it is likely that Head Start has influenced the percentage of timely examinations.

Exhibit 8-2. Physical Examination Dates Relative to July 1993



Note: n=913; 276 child health records were missing this information.
*July 1993 reference point.

As reported in Exhibit 8-2, the review of child health files found that 276 physical examination dates were missing. However, based on information provided during the parent interviews, 258 (93.5%) of these parents reported that their children had physical examinations during the past year. Without cross-checking the child health file data with information provided by the parent, it may appear that many children did not receive the required physical examinations. Overall, the parent reports in addition to the child health files

indicated that 98.5% of all children received a physical examination. This percentage is consistent with the PIR reports.

Parent Reports on Physical Examinations. Of those parents reporting that their children had physical examinations during the past year (n=1,130), 74.4% responded that they arranged the physical examinations themselves and 21.5% stated that Head Start arranged the examinations. Exhibit 8-3 shows the sites of these physical examinations. The majority of the physical examinations were completed at a private doctor's office, private group practice, or a health maintenance organization (HMO)(41.1%).

Exhibit 8-3 Parent Reports of Where Physical Examinations Were Conducted

Location	Unweighted n	Weighted Percent
Private Doctor's Office/Group/HMO	467	41.1
Neighborhood Clinic	185	17.9
Health Department	204	17.6
Hospital Clinic	168	15.5
Head Start Center	48	4.0

Note: The remaining percentage of parents reported that physical exams were conducted in an "Other" location.

Parent Involvement in Physical Examinations. When asked if they had attended their children's physical examinations, 95% of the parents reported that they or another family member were present. The results of the physical examinations were explained to 95.8% of the parents who attended the examination. Apart from the initial physical examination for program entry, 57.2% of the parents reported that their children participated in additional health tests since their enrollment in Head Start.

Health Coordinator Reports on Physical Examinations. Exhibit 8-4 lists screening tests and their inclusion or exclusion as part of the physical examination as reported by the Health Coordinators. Since it was possible for the Health Coordinators to answer that the screening tests were both part of the examination and provided separately, the categories in Exhibit 8-4 are not mutually exclusive.

Exhibit 8-4 Specific Screening Tests and Their Inclusion in the Physical Examination as Reported by Health Coordinators

	Percent		
	Test Is Part of the Physical Examination	Test Is Provided Separately From Physical Examination	Test Is Not Provided At All
Blood Pressure	90.5	21.4	0.0
Vision	69.0	50.0	0.0
Hearing	66.7	52.4	0.0
Tuberculin Test	64.3	31.0	7.1
Lead Testing	47.6	19.0	28.6
Urinalysis	45.2	14.3	35.7
Sickle Cell	35.7	23.8	35.7
Ova and Parasites	21.4	21.4	50.0

Note: N=42 Health Coordinators. Health Coordinators could report tests as being both part of initial physical examination and as subsequent screening tests.

8.2.4 Medical Conditions and Injuries

Parent Interview Summary Procedures. Parents reported on the health status of their children in different ways. They responded to both limited-choice and open-ended questions regarding the findings of specific health screenings and assessments. The research staff developed and applied coding categories based on parent responses across all of the health condition questions. After the responses to each results were summarized across all questions to provide a single list of health conditions for each parent interview. This process

optimized the chances of detecting health conditions during the interview and eliminated the potential problem of a parent reporting the same health condition for each question. The following questions were reviewed:

- Does the child have any special health needs or disabilities? Please specify or describe.
- Has the child ever been hospitalized or undergone an operation? What was the reason?
- Has the child had a serious illness? Please describe the illness and any resulting health problem.
- What were the health concerns that you discussed with the program staff?
- For each medical condition you were told about following the physical examination, please indicate the problem that was identified.
- Please describe the problem that was identified following the health tests.

For the first and third questions, parents were not provided with definitions for "special" or "serious" as they referred to their children's health and, therefore, the responses reflect the parents' perceptions of these terms. It is also important to keep in mind that the parents were interviewed for this study in April or May, near the end of the child's Head Start program year.

Review of Child Health File Summary Procedures. The primary source of information typically used in studies of the health status of Head Start children is the health section of the children's individual Head Start files. Much of the information contained in health files is derived from interviews with parents shortly before the child began attending Head Start. Other information in the records is added as the medical screenings and examinations are completed. As with the parent interviews, the study instrument design used for the child health file abstractions accommodated multiple opportunities for the detection of the same health conditions among the children. The record review form that was used for the

child health file abstractions was based on the 1992 version of the Head Start Child Health Record (Note: The record review form is found in Volume IV: Appendices). The review form contained the following questions for the general assessment of the prevalence of health conditions among the children:

- Was anything wrong with child at birth? If noted, state condition.
- Has the child ever been hospitalized or undergone an operation? If noted, specify.
- Has the child ever had a serious illness? If noted, specify.
- Are any other concerns reported about the child's health? If noted, specify.
- Record all medical diagnoses and treatments as indicated.
- Please indicate if other health conditions were identified in records from subsequent medical visits.

The findings from the record review were coded into the same categories used with the parent data and summarized into a single indicator (yes-present/no) of parent-reported and health record recorded prevalence for each category. Conditions classified as injuries are discussed later in this chapter.

The Most Reported Medical Conditions. The weighted estimates of the most common conditions based on parent reports and reviews of the health files are presented in Exhibit 8-5. All of the health conditions mentioned by the parents were reported for less than 10% of the children. These health conditions include ear problems (9.1%), speech and language problems (8.5%), lower respiratory problems (8.2%), and gastrointestinal problems (8.2%). For almost 70% of the children, parents reported one or more health conditions that they considered to be serious. Information from the health files indicated that about 40% of the children had one or more of the defined serious health conditions.

As shown in Exhibit 8-5, the seven most common parent-reported categories were the same as the seven conditions most frequently reported in the children's health files, although in a somewhat different order. However, the percentages of children identified with each condition was much lower in the child health files. Problems with ears, the condition most commonly reported by parents, were noted in only 4.1% of the records. Among the other most commonly recorded conditions noted in the records were lower respiratory problems (4.6%), upper respiratory problems (3.8%), blood disorders (3.6%), and asthma (3.1%).

Exhibit 8-5 The Most Reported Health Conditions From Parent Interviews and the Child Health Files

Parent Interviews			Child Health Records		
Condition	Unweighted n	Weighted Percent	Condition	Unweighted n	Weighted Percent
Ear Problems	107	9.1	Ear Problems	59	4.6
Speech/Language Problems	104	8.5	Upper Respiratory Problems	49	4.1
Gastrointestinal Problems	101	8.2	Lower Respiratory Problems	47	3.8
Lower Respiratory Problems	100	8.2	Blood Disorders	46	3.6
Asthma	94	7.9	Asthma	39	3.1
Upper Respiratory Problems	71	6.0	Speech/Language Problems	37	2.8
Blood Disorders	66	5.4	Gastrointestinal Problems	28	2.3
Psychosocial/Behavioral Problems	62	5.0	Hernia	23	1.9
Allergies	42	3.8	Heart Problems	18	1.5
Nutrition	45	3.8			

Note: Ear Problems included insertion of tubes and drainage problems.
Gastrointestinal Problems included dietary problems, ulcers, food allergies, pyloric stenosis, enlarged colon, lactose intolerance, and digestive problems.
Lower Respiratory Problems included chronic cough, bronchitis and pneumonia.
Upper Respiratory Problems included problems with the adenoids, glands, tonsils and croup and sinusitis.
Blood Disorders included sickle cell, hemophilia and anemia.
Psychosocial/Behavioral Problems included social delay, emotional problems, failure to thrive and bed wetting.

Asthma was reported by almost 7.9% of parents as a serious health condition. In the U.S. asthma is the most common childhood chronic illness. Emergency-room visits and hospitalizations for acute asthma attacks increased throughout the Nation during the 1980s. Some evidence suggests an interaction between asthma and poverty. For example, among children less than 5 years of age, asthma was more prevalent among families with lower incomes, larger sizes, and fewer rooms in their homes (Halfon & Newacheck, 1993; Adams & Hardy, 1989). Children from low-income families were also more likely to be hospitalized

because of asthma (Halfon & Newacheck, 1993). In this study, 7.9% of the parents reported that their child has asthma.

The National Health Interview Survey (NHIS). The 1991 NHIS (National Center for Health Statistics, 1993) included a Child Health Supplement, which provided a summary of the health conditions of children in the study. Data were available on 603 4-year-old children who were part of a representative national sample of households. The NHIS children were more representative of the general U.S. population and of all economic groups than the Head Start children in this study. The NHIS health conditions, although not based on the same coding system as applied in this study, were similar to the coded health conditions reported above. The most reported health conditions from the NHIS are listed in Exhibit 8-6. Respiratory conditions and diseases were the most frequently reported medical problems in the NHIS survey. As shown, the proportion of 4-year old children reported to be affected by chronic respiratory conditions in the NHIS survey (21.3%) is similar to the total of parent reported serious respiratory conditions (upper: 6.0%; lower: 8.2%; asthma: 7.9%; total: 22.1%) in the present study. It is important to note that behavior problems were not assessed in the NHIS. However, in this study, parents reported behavior problems (5.0%), but no indication of behavior problems were indicated in the records. The health conditions encountered by Head Start children appear to be similar to problems encountered by a national sample of preschool children.

Exhibit 8-6 The Most Reported Health Conditions for 4-Year-Old Children From the National Health Interview Survey (1991)

NHIS Health Conditions	Percent
Acute Respiratory Diseases (i.e., Laryngitis, Bronchitis, Influenza)	21.3
Chronic Respiratory Conditions (i.e., Asthma, Emphysema)	21.3
Diseases of the Skin	5.7
Viral Diseases	4.0
Disorders of the Eye	2.9
Diseases of the Ear	2.7
Other Bacterial Diseases	2.7
Diseases of the Musculoskeletal System and Connective Tissue	2.2
n	603

Source: National Center for Health Statistics, National Health Interview Survey, Child Health Supplement, 1993

Multiple Health Conditions. Some children are more prone to health problems than other children. The coding procedures mentioned above allowed checking for multiple health problems among the children in the study sample. Serious injuries are not included, and are presented later in this section. According to the parent reports, 31.3% of the children had not experienced any serious health conditions, while 38.2% had experienced only one serious health condition. About 20% reported two different conditions, and the final 10% experienced three or more serious health problems.

As might be expected, the review of the child health files showed fewer children with multiple health conditions. A single health condition was noted for 27.3% of the children, about 9% indicated two conditions, and only about 4% identified three or more conditions.

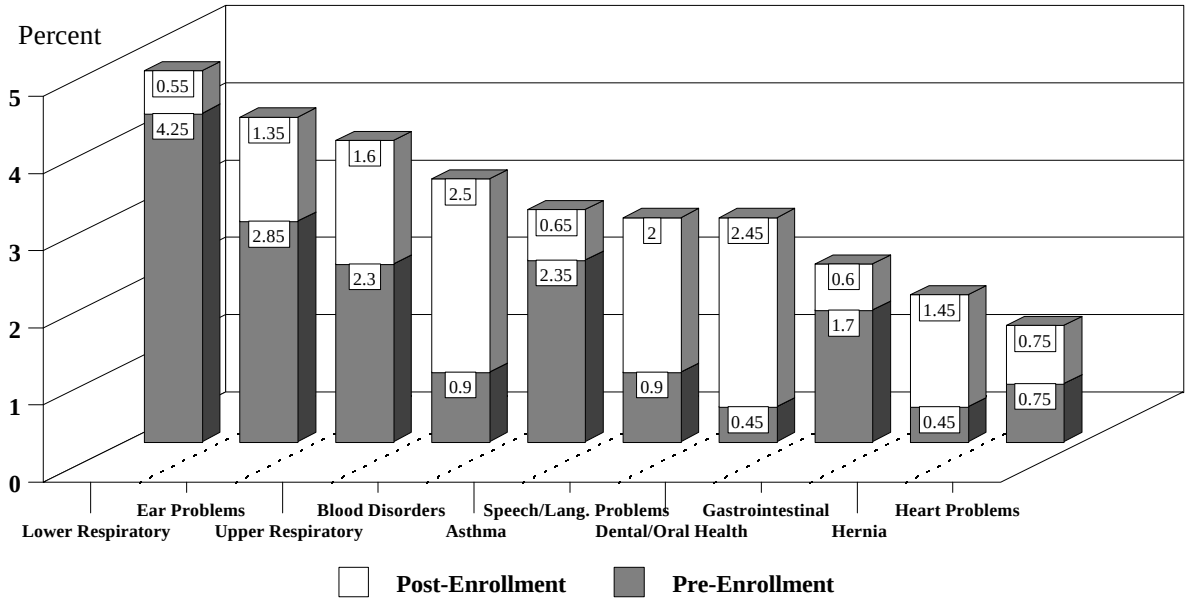
Pre-Head Start/Post-Head Start Enrollment Comparison. One strategy for assessing the potential impact of the Health Component on the detection of health conditions is to determine how often specific conditions were reported prior to or after enrollment in Head Start. Documentation of actual Head Start enrollment dates for children was inconsistent, incomplete, or kept in files not made available to the research team. By July 1, 1993, however, most of the children had been interviewed and enrolled for the upcoming Head Start program year. That date provides a reasonable estimate of the point when most of the families had come under the influence of Head Start and the Health Component staff. Because certain background health information was collected from the caregiver at the initial Head Start enrollment interview, these reports were viewed as providing information on health conditions prior to Head Start. Subsequent reports of examinations from the health files were considered as having happened during the period of Head Start influence.

Health conditions from the review of the child health files, split into those noted before July 1, 1993 and those noted July 1 or later, are summarized in Exhibit 8-7. While 4.8% of all children were reported to have had lower respiratory problems, 4.3% of the children had this condition noted before Head Start enrollment. Similarly, asthma, ear problems, and gastrointestinal problems were also more likely to have been detected before entry into Head Start. Note that these estimates are conservative, since a significant proportion of 4-year-old children could have first entered and been screened by Head Start when they were 3 years old. In Chapter 3: Methodology, it was noted that, based on the 1993-1994 PIR data, 18.4% of the children from our sample programs were 4 years of age and in their second year of Head Start.

However, several categories of health conditions were often detected during health screenings or examinations following entry into Head Start. As shown in Exhibit 8-7, conditions such as blood disorders, speech and language problems, dental/oral health conditions, and hernias were 2 to 5 times more likely to be detected in these later screenings and examinations. These findings may reflect the increased age of the children at the time of

the examinations, as well as the expanded scope of the physical examination administered under Head Start's guidelines.

Exhibit 8-7 The Most Reported Health Conditions from the Child Health Files: a Comparison of Pre- and Post- Head Start Enrollment*



*Head Start enrollment estimated as of July 1, 1993.

Serious Injuries. One item on the parent interview form specifically addressed serious injuries:

(6,34)Has your child experienced a serious accident? Please describe the injury and any resulting health condition.

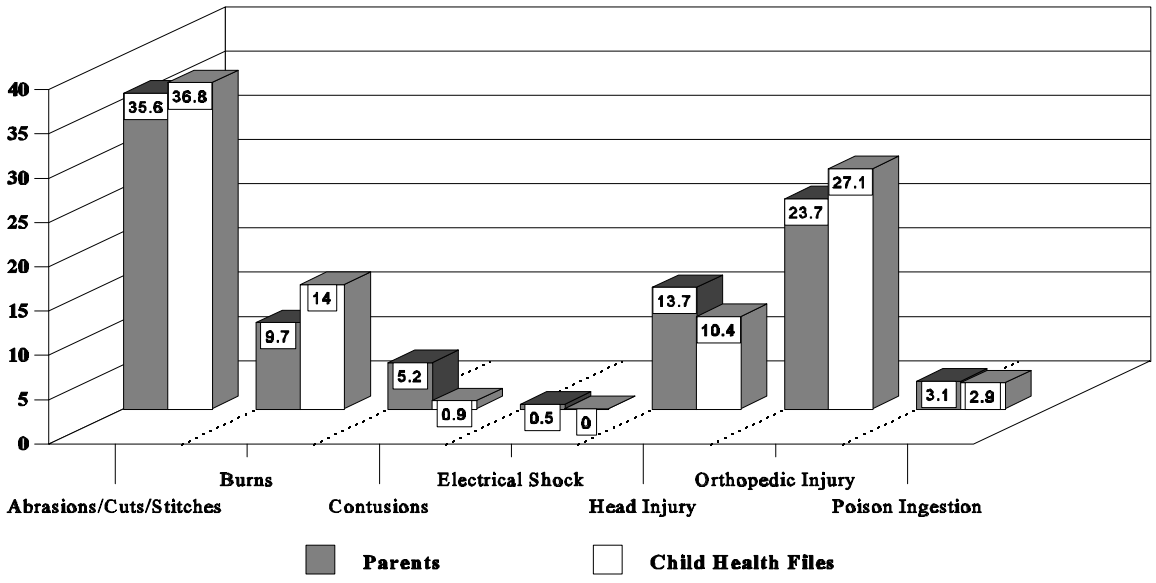
As with the earlier questions, this item was open-ended and the parents applied their own interpretation of the term "serious." The data were coded into a series of injury categories.

Exhibit 8-8 presents the frequency of reports for seven categories of injuries drawn from the parent interviews and record reviews. Approximately 11% of the parents (n=130)

reported at least one serious injury to their child. The injuries most reported included abrasions, cuts, and stitches (35.6%); orthopedic injuries (e.g., broken ankle, leg, arm, wrist) (23.7%); head injuries (13.7%); and burns (9.7%). The review of the child health files showed that over 8% of the health records indicated serious injuries. The major categories included abrasions, cuts, and stitches (36.8%) and orthopedic injuries (27.1%). Note that the data from the parent interviews and health files indicated a much better correspondence for injuries than for health conditions. Unlike health conditions identified during examinations and screening tests, these injuries, which in most cases required medical attention immediately, were reported more often in the health files.

Exhibit 8-8 Types of Serious Injuries as Noted in the Parent Interviews and Child Health Files

Note: Sample sizes are based on unweighted data from the parent interviews or child health files indicating an injury (parent interview: n=130; child health file: n=88).



Multiple Serious Injuries. According to the parent reports and child health files, few of the children in the sample experienced multiple serious injuries. Only 2.1% of the parents reported that their children had experienced multiple serious injuries, of which 1.6% experienced two and 0.5% experienced three. The health files indicated that 1.1% of the children experienced multiple serious injuries, of which 1.0% experienced two and 0.1% experienced. The Northeastern Ohio Trauma Study (Fife et al., 1984) found that the leading cause of injuries in children 0-4 years was falls, followed by cuts. Although this study was based on a national sample of 4-year old children in Head Start, and Fife looked at 0-4 year olds visiting the emergency room, the same types of injuries have consistently been reported in both studies.

8.2.5 Findings From the Health Assessments

The Head Start Child Health Record includes a number of general assessments completed by the individual conducting the health examination. These categories and the related findings are presented in Exhibit 8-9. Because of differences in the types of health records used, not all categories of assessments were available for each child, resulting in a percentage of health files with results not being recorded.

Exhibit 8-9 Results From Assessments During Physical Examinations as Noted in the Child Health Files

	Normal		Abnormal		Not Evaluated		Not Recorded	
	Unwtd n	Wtd Percent	Unwtd n	Wtd Percent	Unwtd n	Wtd Percent	Unwtd n	Wtd Percent
General Appearance	967	82.7	12	0.9	14	1.0	189	15.4
Posture/Gait	842	70.3	10	0.8	47	3.9	285	25.1
Head	939	79.5	5	0.4	29	2.6	207	17.5
Skin	988	83.2	29	2.7	15	1.1	148	13.0
Nose, Mouth, Pharynx	972	82.3	43	3.7	13	0.9	151	13.0
Heart	1004	85.8	27	2.4	17	1.2	129	10.6
Lungs	1023	87.1	10	0.9	13	0.9	136	11.1
Abdomen (Hernia)	995	85.3	11	0.9	15	1.1	158	12.7
Genitalia	938	80.4	17	1.5	36	2.9	189	15.3
Bones, Joints, Muscles	913	79.3	12	1.0	20	1.4	235	18.3
Glands (Lymphatic Thyroid)	777	67.5	10	0.5	31	5.2	362	26.8
Muscular Coordination	809	67.1	7	0.5	59	5.1	306	26.6
Eyes (External)	954	81.8	17	1.4	17	1.4	190	15.4
Eyes (Optic Fundiscopic)	811	69.0	16	1.3	67	6.0	284	23.7
Eyes (Cover Test)	800	67.8	13	1.0	76	6.9	291	24.3
Ears (External, Canals)	957	82.1	32	2.6	5	0.4	185	14 .9
Ears (Tympanic Membrane)	892	75.7	32	2.8	15	1.3	239	20.3

Specific Health Assessment Findings. Systolic and diastolic blood pressure readings were available in the child health files for 84.4% of the children (n= 1,004). The mean systolic blood pressure (SBP) was 88.7 mmHg, while the mean diastolic blood pressure (DBP) was 54.52 mmHg. Based on recently established blood pressure cutpoints (Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure, 1993), SBP

readings over 108 mmHg and DBP readings over 70 mmHg place children in the 90th percentile for each measure. For SBP, 3.0% of the children were above the cutpoint, while 7.2% were above the cut point for DBP.

A concern expressed by several Head Start Health Coordinators was **lead poisoning**. According to Mushak (1992), the principal environmental health issue for U.S. children is pervasive lead poisoning from many years of lead contamination. Although the effects of lead poisoning have been known for many years, only recently has it been understood that lead exposure levels previously thought to be harmless have pervasive behavioral effects. In 1990, an estimated 3 million children had blood lead levels of 10 mcg/dl of blood or higher, levels that can adversely affect their development and cognitive abilities (Binder & Matte, 1993) and can cause preventable learning disorders (Feldman & White, 1992). A recent study showed that reductions in blood lead levels were associated with increases in cognitive ability (Ruff, Bijur, Markowitz, Yeou-Cheng & Rosen, 1993).

The primary source of lead poisoning remains lead-based paint, particularly in older urban housing (Chao & Kikano, 1993). Although lead-based paint has been banned from residential use since 1978, roughly 74% of the houses built before 1980 have lead-based paint as well as lead-contaminated soil in their yards (Binder & Matte, 1993). Children living in poor housing are at high risk of exposure to toxic levels of lead. Moreover, among children aged 6 months to 5 years, the mean blood concentration of lead is associated with family income (Mahaffey, Annest, Roberts & Murphy, 1982). Children living in inner cities have higher lead concentrations than other children. The prevalence of lead poisoning is highest among African-American children living in low-income, inner-city areas (Guthrie & McNulty, 1993).

Among the Head Start children, 13.8% had results of a lead test in their file. Of those tested, the mean result was a lead level of 10.4 mcg/dl, while 18.9% of the levels were higher than 15 mcg/dl, which would require medical attention. However, the study was unable to

collect specific data on whether treatment was prescribed for those children with high lead levels. In the U.S., 17% of preschoolers have a blood lead greater than 15 mcg/dL (CDC, 1991).

Results of **hearing and vision tests** were recorded in the health records. Overall, 3.5% of the Head Start children (n=42) had a hearing problem with either or both ears. For 3.5% of the Head Start children (n=40), a vision problem with one or both eyes was recorded.

The child health files typically contained other specific test results, which are summarized in Exhibit 8-10. The **Tuberculin test** (TB) results are required under many State health policies or where community prevalence rates exceed 1%. During the past several years, the previous steady decline in tuberculosis has reversed (Stansberry, 1990). Fueled by increasing poverty, homelessness, immigration, drug abuse, reductions in prevention programs, and the HIV epidemic, the incidence of tuberculosis in the United States has increased dramatically (Agrons, Markowitz, & Kramer, 1993). The disease remains concentrated in the growing population of socioeconomically disadvantaged persons, and TB screening is recommended for children who are in contact with adults at risk for the infection (Levin, Gums & Grauer, 1993). Over half the children in this study have recorded TB test results. Test results were positive for 0.7% of all the children. In 1991, the number of TB cases among children under 5 years of age in the United States was 1,006 (Khan and Starke, 1995).

Exhibit 8-10 Findings Reported in the Child Health Files: Tuberculin, Sickle Cell, Urinalysis, and Ova and Parasites

Type of Test/Screening	Positive		Negative		Not Noted Record	
	Unweighted n	Weighted Percent	Unweighted n	Weighted Percent	Unweighted n	Weighted Percent
Tuberculin Test	10	0.7	604	51.7	575	47.6
Sickle Cell	8	0.8	168	14.1	1013	85.1
Urinalysis	11	0.8	398	32.2	780	67.8
Ova and Parasites	6	0.7	73	5.6	1110	93.7

A small group of children had **sickle cell test** results in their files. Only 0.8% of the children had positive test results, 14.1% were negative, and 85.1% did not have a test result recorded. Similarly, a low percentage (0.8%) of study children had positive **urinalysis tests**, while 32.2% had negative tests, and 67.8% had no test result recorded in the health file. Finally, 0.7% of the children had reports indicating that **parasites** were present, 5.6% had results showing an absence of parasites, and 93.7% had no parasite test results in the file. As with TB testing, these other tests were only required based on the results of individual or community health assessments or on the recommendations of the State or the program's Health Services Advisory Committee. Overall, the child health files indicated that 22.4% of the children (n=271) had one or more abnormal findings based on their screening tests.

8.2.6 Medical Treatments

Sources of Data. Parents reported on the findings of initial health screenings or examinations and any subsequent medical tests. For types of medical treatments and compliance with recommended treatments, parents answered the following questions:

- Did the physical examination show any medical conditions? For each condition you were told about, please tell me the problem that was identified, the recommended treatment, if treatment was completed and/or the reason for non-completion of treatment.

- Apart from the physical examination, has your child participated in any other health tests since enrollment in Head Start? Did any of these subsequent tests identify a health problem? Please tell me the problem that was identified, the recommended treatment, and if the treatment was completed or the reason for non-completion of treatment.

The child health files were a second source for the same information. Although the record review form was constructed to capture health conditions reported during the initial health screening or examination and any subsequent medical tests, the variable state of the health files within and across sites made it difficult to determine when many conditions were actually identified. Therefore, treatments reported from the health records were not separated from those for conditions identified during physical examinations for entry into Head Start or those identified through later screenings or subsequent tests apart from the initial physical examination.

For the children who had a physical examination reported (n=1,177), 13.2% (n=155) of the parents reported that health conditions were identified during the exam, while 17.3% (n=204) reported that health conditions were noted during subsequent tests apart from the initial physical examinations. The child health files indicated that 21.7% (n=203) of the children had one or more health conditions noted during the examinations or subsequent tests. The types of treatments were reported by parents for the conditions identified during the physical screening/examinations and subsequent tests and from child health files, respectively. When parents were asked if someone from Head Start spoke with them about treatment for conditions identified in their child, 47.3% responded "yes." Medication was the most common treatment reported by parents (47.2%, initial screening or examination; 20.3%, subsequent tests) and from the child health files (28.7%).

Treatment Status. Exhibit 8-11 shows the status of treatments from the physical screening/examination and subsequent tests. Less than 1.0% of the parents indicated that they did not seek treatment for their child's health condition, while the majority of parents reported that the treatment was in progress or ongoing (38.5%, initial screening or examination;

39.1%, subsequent tests). Unfortunately, because of some inconsistencies in the probes used by the researchers regarding treatment status, the resulting percentages for missing data were higher than anticipated.

Exhibit 8-11 Status of Treatments for Conditions Noted During Health Screenings and Examinations as Identified in the Parent Interviews

Status	Unweighted n	Weighted Percent From Parent Interviews (Initial Exam)	Unweighted n	Weighted Percent From Parent Interviews (Subsequent Tests)
Treatment Completed	57	32.1	28	27.7
Treatment in Progress/Ongoing	66	38.5	36	39.1
Did Not Seek Treatment	1	0.5	0	0
Status Not Indicated	46	28.9	34	33.2
n	170*		98**	

* Sample size is based on the 170 treatments detected by the 155 parents whose children had one or more health conditions detected during the physical exam.
** Sample size is based on the 98 treatments detected by the 117 parents whose children had one or more health conditions detected during any health tests since enrollment in Head Start.

Exhibit 8-12 shows the status of treatment from the child health files. Few of the files indicated if the treatment was completed (10.6%) or if it was in progress or ongoing (7.2%); the majority of the child health files (82.2%) did not indicate whether the child received any treatment. On the other hand, the 1993-1994 PIR reported that, across all programs, medical treatment was provided to a mean of 96.2% of the children who needed it. Two possible explanations for this difference are: (1) Head Start programs are not following up on medical treatment services for those children requiring treatment; or (2) treatments are being followed up, but the findings are not being documented in the child health files. The problems in

keeping up-to-date records seem to have particularly affected the area of recording treatment status. Since the expenditure of time is so great in trying to find, provide, and arrange payments for treatment services for each child, it seems likely that recording treatment services in the children's health records receives a low priority.

Exhibit 8-12 Status of Treatments for Conditions Noted During Health Screenings and Examinations From the Child Health File

Status	Unweighted n	Weighted Percent
Treatment Complete	20	10.6
Treatment in Progress/Ongoing	15	7.2
Did Not Seek Treatment	0	0
Status Not Indicated	174	82.2
n	209*	

*Sample size is based on the 203 child health files indicating one or more health conditions reported.

8.3 Summary

Activities related to the provision of medical screenings and examinations provided or arranged for by Head Start programs were reported. Data from this chapter came from parent interviews, child health files, and from individual staff reports. The highlights of the findings are presented below.

(6,34)Almost 50% of the Health Coordinators reported that dental and oral health problems were a serious health condition which their program had to address in the last year. However, over 27% of the Center Directors reported childhood illnesses (e.g., chicken post, measles) and lice as serious health conditions they had to address in their program in the past year.

(6,34)Parent reports, in conjunction with reviews of the child health files, indicate that 98.5% of the Head Start children received physical examinations during the past year.

- The health conditions most reported by the parents were ear problems, speech and language problems, gastrointestinal problems, lower respiratory problems, and asthma.

- The health conditions noted in the review of the child health files were similar to those cited by the parents, but the frequency of the reports were generally lower than those provided by the parents.

- Almost 30% of the children had no mention of a health condition by their parents, while the child health files had no health condition listed for about three fifths of the children.

- Less than 13% of the child health files indicated multiple health conditions, while almost one third of the parents reported multiple health conditions for their children.

- Screenings and examinations conducted while enrolled in Head Start were able to help detect several health conditions that were typically not noted during screenings and examinations conducted prior to Head Start enrollment. Conditions more likely identified after enrollment include lower respiratory problems, blood disorders, speech and language problems, and hernias.

- Approximately one-tenth of the parents reported that serious injuries had occurred to their children. Injuries most reported were cuts, abrasions, and

stitches for more than one third of those children, and orthopedic injuries for just under one quarter of that group. Reports of injuries were noted in less than 8% of the child health files.

- Medication was the most common treatment. It was reported by almost one half of the parents as treatment for conditions noted at the initial screening or examination, one fifth for conditions found during any subsequent medical tests, and it also was noted in almost one third of the child health files.

- The child health files contained little documentation about whether treatments were completed or if they were in progress or ongoing. Over 80% of the health records which reported a health condition had no follow-up data on the status of the recommended treatments.

9.0 THE DENTAL HEALTH DOMAIN

9.1 Overview

Few studies have considered the impact of a family's economic status on the impact of the oral health of children under the age of 6 years. Studies of older children, however, show that dental disorders are higher among low-income children than other children. In 1984, Fosburg noted that one fourth of Head Start's children involved in a study of health services were urgently in need of dental care (Fosburg, 1984). In that study, the children had an average of four unfilled cavities. According to a 1987 Children's Defense Fund (CDF) survey (1991), 53% of the children between 6 and 8 years of age had cavities and 27% had untreated cavities. The same study reported that among a sub-sample of children who were from low-income families, 70% of the children had cavities and 43% had untreated cavities. This report also noted that low-income, Native American, African-American, Latino, migrant children, and children with disabilities generally have inadequate dental health because they are less likely to have regular dental care. Only 10% of the dentists accept patients enrolled in Medicaid, and millions of low-income families with children live in communities with no dentists.

The prevalence of dental caries in Head Start children has been reported in four recent studies (Barnes, Parker, Lyon, Drum & Coleman, 1992; Jones, Schlife & Phipps, 1992; Kaste, Marianos, Chang & Phipps, 1992; Katz, Ripa & Petersen, 1992). Among the Region VI Head Start programs, a study of baby bottle tooth decay found that less than half of the children were caries free (no caries, no restorations) and that children in rural areas were less likely than children from non-rural areas to achieve that status (Barnes et al., 1992). In the Virgin Islands, 41% of the children were found to have caries (Katz et al., 1992). Among American Indian children attending Head Start in 1977-1978, a significant relationship was found between caries detected during enrollment and 10 years later (Kaste et al., 1992).

Finally, among Head Start children in Alaska, 45% of the sample was in need of dental restorative treatment (Jones et al., 1992). On average, children in rural areas needed treatment on 2.8 teeth, while those in urban areas needed treatment on 0.8 teeth. While these differences may result from the lack of fluoridated water in rural areas, these studies inform us that significant numbers of Head Start children require dental treatment when they enter the program.

Head Start plays a significant role in working with families to ensure that children receive regular dental screenings and examinations. The Head Start requirements for dental examinations are detailed in the Program Performance Standards (§1304.3-4). The guidelines for the Program Performance Standards indicate that a dental screening should be performed for each child, but this screening is not required. The dental screening is a general inspection of the mouth to observe oral health problems in order to establish priorities or categories for the subsequently required dental examination and treatments as needed. Screenings and examinations may take place at Head Start centers or Head Start staff may assist families in scheduling appointments with community health providers. Dental screenings may be performed by a dentist, dental student, dental hygienist, dental assistant, or trained Head Start staff member, while the dental examinations must be performed by dentists. The primary source of support for examination services for Head Start children is Medicaid (see Chapter 2: Historical Context of the Health Component).

Some research has targeted the impact of Head Start on health screenings and examinations for involved children. Fosburg (1984) examined dental services as part of a larger study of the Head Start health services delivery system, focussing on comparing the health status of Head Start children with non-Head Start children. The study found that far more Head Start children received dental examinations than non-Head Start children (80% vs. 27%).

Hale, Seitz, and Zigler (1990) examined the medical records of 40 children enrolled in Head Start, 18 low-income children on a Head Start waiting list, and 20 children in a nursery school serving middle-class families. One area in which these groups of children were compared was dental screenings and examinations. Currently enrolled Head Start children were more likely than the low-income waiting-list children and middle-class children to receive dental examinations (95% vs. 39% and 75%, respectively). Thus, it appears that, for these low-income children, the formal Head Start health services delivery system made an important difference in their receipt of dental care (Zigler et al., 1994).

Subsequent to the findings of dental screenings and examinations, the Head Start Program Performance Standards require that Head Start programs provide or arrange for treatment services where necessary (§ 1304.3-4). Each Head Start program is responsible for developing a plan for staff to assure treatment and follow-up services are part of the competent and continuing care which is received until the conditions are remedied or until a pattern of continuing care has been well established. Head Start staff typically play the role of broker in assisting parents in securing the necessary services and in identifying funding sources to pay for the services.

Recently, Brush et al. (1993) examined the quality of Head Start comprehensive services using resident Head Start databases (The Program Information Report (PIR), and the On-Site Program Review Instrument (OSPRI)). They found that most grantees deliver extensive services and meet nearly all of the Performance Standards for each Head Start Component (Education, Social Services, Health, and Parent Involvement). Based on the 1992 PIR, the study found that dental treatments were provided to an average of 96% of the children requiring treatment at each program.

The OSPRI results, which are based on reviews conducted on-site by an independent team of visitors, indicate that most grantees are meeting the dental needs of a high percentage of enrolled children (80% or more), but that a significant number of grantees are unable to

match that performance each year. Grantees with larger enrollments (over 1,000) appear to have particular difficulty in arranging needed dental services for their children.

An understanding of the dental conditions of Head Start children which program staff must address is an important step in examining the patterns of delivery and the use of all health care services by these children. This chapter presents data from dental screenings and examinations, reported dental conditions and subsequent treatments among children in the study sample.

9.2 Findings

Data in this chapter are from both the parents' reports and the child health files. Because of the interest in having national estimates, the percentages were weighted (see Chapter 3: Methodology). Staff reports are unweighted.

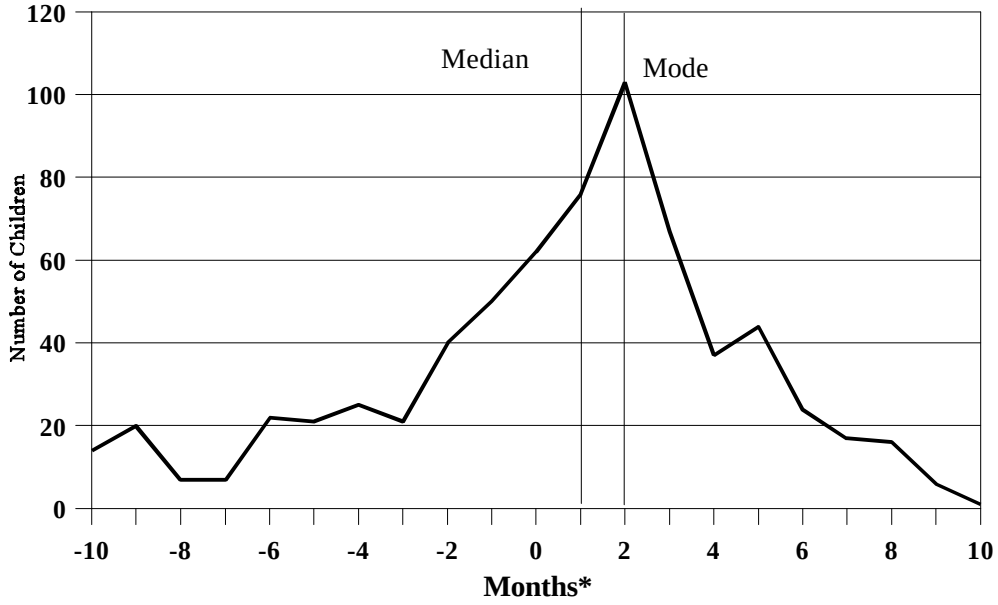
9.2.1 Timing and Methods of Completing Dental Examinations

Timing of Dental Examinations. The Program Performance Standards require that annual dental examinations be oral diagnostic procedures conducted by a dentist. Examinations may include diagnostic radiographs (X-rays), but only if the dentist determines that they are absolutely necessary (§1304.3-3).

As noted earlier, the dates of enrollment and initial participation in Head Start services vary greatly among the study children. Since dates for the initiation of Head Start-related activities could not be determined consistently across the records of the children included in this study, July 1993 was chosen as a standard reference point against which to compare examination dates for all children because it is just before the beginning of the Head Start program year. Exhibit 9-1 shows the distribution of dental examination dates relative to the reference point of July 1993. These examination dates have been abstracted from the

children's health records. The median month for dental examinations was one month after July and the mode was two months after July. During these months Head Start staff are usually working with parents to ensure a smooth transition into the program, and it is very likely that Head Start has had some influence on the percentage of examinations completed within this timeframe.

Exhibit 9-1 Dental Examination Dates Relative to July 1993



Note: n=735; 456 child health records were missing this information.
*July 1993 reference point.

As reported in Exhibit 9-1, the review of child health files found that 456 dental examination dates were missing. However, similar information collected during the parent interviews for those children with missing dental examinations dates from their health records indicated that 413 (90.6%) of the children did have dental examinations in the past year. Researchers in the field noted that, when available, the forms for recording the dental information were inconsistent and confusing, often containing unused or poorly used mouth charts where conditions and treatments could be noted. Without cross-checking the child health file data with information given by parents, it would falsely appear that many children

did not receive the required dental examinations. Overall, the parent reports in addition to the child health files indicated that 96.4% of all children received a dental examination. This finding is consistent with the PIR reports.

Parent Reports on Dental Examinations. Of those parents reporting that their children had a dental examination in the past year (n=1,099), 54.1% responded that they had arranged the examination themselves and 44.2% reported that Head Start arranged the examinations. As seen in Exhibit 9-1, the process of enrolling in Head Start may have prompted parents to schedule and arrange dental examinations. Exhibit 9-2 shows that the majority of the dental examinations were completed at a private dental office, a private group practice, or a health maintenance organization (HMO)(56.5%). Parents who said that Head Start arranged the dental examinations (n=486) were asked how they were informed about the appointments. Most said that information was brought home by their children (49.2%) or they discussed the appointment with a staff member when they picked up/dropped off their children at Head Start (33.5%).

Exhibit 9-2 Parent Reports of Where Dental Examinations Were Conducted

Location	Unweighted n	Weighted Percent
Private Dental Office/Group/HMO	635	56.5
Neighborhood Clinic	192	19.4
Health Department	88	7.5
Hospital Clinic	20	1.8
Head Start Center	121	11.1

Note: The remaining percentage of parents reported that dental exams were conducted in an "Other" location.

Parent Involvement in Dental Examinations. When asked if they had attended their children's dental examinations, 73.3% of the parents reported that they or another family member were present. The results of the dental examinations were explained to 92.6% of the parents who accompanied the children.

Health Coordinator Reports on Dental Examinations. It was reported by 92.9% of the Health Coordinators that their programs provided or arranged for dental examinations. Dental examinations were mostly conducted off-site (60.5%) or a combination of both on-site and off-site locations (26.37%). Health Coordinators reported that a private practitioner (individual, group, or HMO) primarily conducted the dental examinations (84.6%).

9.2.2 Dental Conditions

Summary Procedures. The general health status questions at the start of the parent interviews were supplemented by questions regarding the specific results of dental examinations. Parents provided information about dental conditions in response to the following probes.

- Does the child have any special health needs or disabilities? Please specify or describe.
- Has the child ever been hospitalized or undergone an operation? What was the reason?
- Has the child had a serious illness? Please describe the illness and any resulting health problem.
- What were the health concerns that you discussed with the program staff?
- For each dental condition you were told about, please indicate what condition was identified.

The dental health section in the Head Start Child Health Record provided the framework for the dental questions on the record review form. Unfortunately, missing forms and variations

in the format of the child health files both across and within grantees resulted in considerable missing data on the status of dental health. Indeed, some children's dental records were only maintained in the office of the dental care providers, where researchers did not have authorization to gather information. Where available, the data collected came from the following question abstracted from the child health file:

- Does the child have any reported trouble with teeth, gums, or mouth?

Responses to the parent interviews and details from the review of health files were coded into the same summary categories.

Conditions. In the parent interviews, 41.9% of the respondents indicated that their children had an identified dental condition. The dental condition reported by most parents was dental caries (82%). Other conditions, noted at much lower frequencies, included broken or dead teeth (5.7%) and lack of preventive care (5.3%).

Where available, the data from the child health files were more detailed regarding the status and number of filled, decayed, or missing teeth because of the reporting requirements of the Head Start Child Health Record. Only 11.3% (n=145) of the health files indicated that a child had a reported dental problem. Unfortunately, dental reports were unavailable for many children: 42.2% of the files had no recording of whether or not the child had dental problems. Therefore, oral health conditions are expected to be under-reported across the Head Start health files. For the subset of children with recorded dental concerns, the information in the records indicated that 5.3% had teeth extracted, 6.2% had fillings present, and 17.3% had teeth with signs of decay, a much lower proportion than suggested by the parents during their interviews. The mean number of extracted teeth was 3.07 (range = 1 to 8), and the mean number of filled teeth was 3.6 (range= 1 to 9). The children with dental reports had a mean of 4 teeth with indications of decay (range= 1 to 12). In most files, the presence or absence of any of these three conditions was not recorded.

Pre-Head Start/Post-Head Start Enrollment Comparison. One strategy for assessing the potential impact of the Health Component on the detection of dental conditions is to determine how often these conditions were reported prior to or after enrollment in Head Start. As discussed earlier, July 1993 provides a reasonable estimate of the point when most of the families had began interacting with the Health Component staff. Because certain background health information was collected from the caregiver at the initial Head Start enrollment interview, these reports were considered as providing information on dental conditions prior to Head Start. Subsequent reports of examinations from the health files were considered as having happened during the period of Head Start influence (see Chapter 8: The Medical Health Domain). Dental/oral conditions from the review of the child health files were split into those noted before July 1, 1993 and those noted July 1 or later. Of the approximately 3% of identified dental/oral conditions, 2.45% were identified following entry into Head Start.

9.2.3 Dental Treatments in the Study Sample

Sources of Data. The parents responded to one question relative to dental treatments, and information was also drawn from dental health information in the child health files. The question from the parent interview was:

- Did the dental examination specify any dental conditions? For each dental condition you were told about, please tell me what the condition was, the recommended treatment, if treatment was completed and/or the reason for non-completion of treatment.

The status of dental information in the child health files resulted in data that were different in format from the questions asked of the parents. Therefore, parallel data are not available from the child health files and the parent interviews.

Treatments. Of those parents reporting a dental condition identified during the dental examination (n=488), 53.9% indicated that someone from Head Start spoke to them about

needed treatments. Exhibit 9-3 presents parent reports of dental treatments. The most common dental treatment reported by parents was fillings (70.5%), while each of the remaining treatments was reported by less than 20% of the parents. As shown in Exhibit 9-4, 54.9% of the children had completed treatment, and 21.1% of the children had treatment ongoing or still in progress, while 24.0% of the parents reporting dental problems did not or could not specify the status of their child's dental treatments. As noted under the medical domain, the interviewers were not consistent in their probes regarding treatment status, therefore the percentages for missing data were higher than anticipated.

Exhibit 9-3 Treatments for Conditions Noted During Dental Examinations as Reported by the Parents

Treatment	Unweighted n	Weighted Percent
Fillings	343	70.5
Cap/Crown	75	16.0
Tooth Extracted	57	12.3
Preventive Care (Fluoride, Cleaning, Sealants)	56	10.6
Other	17	3.1
Orthodontic Repairs	14	3.0
Root Canal	9	1.7
Not Recorded	11	1.3
n	**582***	

*Sample size is based on 582 dental conditions reported by 488 parents whose children had one or more dental conditions reported during the dental exam.

Exhibit 9-4 The Status of Dental Treatments as Reported by Parents

Treatment	Unweighted n	Weighted Percent
Treatment Completed	343	54.9
Treatment in Progress/Ongoing	128	21.1
Not Specified	111	24.0
n	**582***	

*Sample size is based on 582 dental treatments reported by 488 parents whose children had one or more dental conditions reported during the dental exam.

Finally, dental treatment needs were indicated in the child health files and are found in Exhibit 9-5. Only 38.9% of the child health files specifically indicated that the child had no dental conditions requiring dental treatments. The remaining treatments, fluoride (27.5%); cleaning (32.5%); and restoration, extraction, filling, crown, and bridge (26.4%), were recorded less often in the child health files than they were reported by parents.

Exhibit 9-5 Dental Treatment Needs Indicated in the Child Health Files

Treatment	Unweighted n	Weighted Percent
No Problems	452	38.9
Cleaning	381	32.5
Fluoride	322	27.5
Restoration, Extraction, Fillings, Crowns, Bridges	301	26.4
Other	110	9.6

Note: The bottom four categories are not mutually exclusive.

9.3 Summary

Activities related to the provision of dental screenings and examinations provided or arranged for by Head Start programs were reported. Data from this chapter came from parent interviews, child health files, and from Health Coordinator reports. The highlights of the responses are presented below.

- Head Start may have positively affected the timeliness of children receiving dental examinations by providing, arranging, or assisting in getting the children examined.

- Overall, parent reports, in conjunction with the review of the child health files, indicate that 96.4% of the Head Start children received dental examinations in the past year.

- Over 92% of the Health Coordinators reported that their programs provide or arrange dental examinations for children enrolled in Head Start and that most of the examinations are conducted off-site.

- Almost 42% of the parents reported that their children had identified dental conditions and over 80% of the identified conditions were dental caries. Only 11% of the health files indicated that a child had a reported dental problem. However, 42% of the child health files had no recording of whether or not the child had dental problems.

- Parents reported that over 70% of the dental treatments recommended for dental conditions were fillings. Almost 54% of the parents said that Head Start spoke to them about treatments for their children's dental conditions.

10.0 THE MENTAL HEALTH DOMAIN

10.1 Overview

Left undiagnosed or untreated, mental and emotional disorders can lead to impaired social functioning, adaptation, and productivity. In 1986, the Office of Technology Assessment (OTA) estimated that 12% to 15% of the Nation's children suffer from one or more mental disorders severe enough to require treatment. Even though the number of children receiving mental health services in a given year has increased significantly since 1980, the OTA (1986) estimated that up to 70% of the children and adolescents needing such services were not receiving care. Disruptive behavior disorders (e.g., attention deficit hyperactivity disorder (ADHD), conduct disorder) were the most frequently noted forms of childhood mental illness. However, more than 5% of all school-age children suffer from depression, anxiety disorder, or serious learning disabilities (OTA, 1986).

More recent data provide somewhat different figures, estimating that 3% to 5% of school children have a serious behavioral or emotional disorder (Knitzer, Steinberg & Fleisch, 1990). However, the Center for Mental Health Services (1994) reports that the lack of national epidemiological studies on mental disorders in children in the United States has created a need for valid prevalence or incidence indicators.

Low-income children may experience more mental and emotional problems than other children (Gould, Wunsch-Hitzig & Dohrenwend, 1981). Poverty places children at greater risk for "a host of biologic insults that threaten the integrity of the central nervous system," and epidemiologic studies have shown an association between organic brain dysfunction and psychiatric disorder in children (Hertzig, 1992). Adams and Hardy (1989) found that delays in growth and development were reported for 4% of all children and that the rates of such disorders were higher (7%) in families with incomes less than $10,000 per year. Because emotional disorders are more likely among low-income children (Angel & Angel, 1996), these

children may also be more susceptible to co-morbid disorders posing threats to both physical and mental health.

Head Start's comprehensive model for mental health reflects a positive, holistic approach, with a primary emphasis on normal child development in the context of daily living skills and social competence (Hansen & Martner, 1990). Mental health objectives are grouped into three levels of intervention: prevention, identification and referral, and treatment. This holistic approach is designed to address all of an individual's needs: physical, emotional, social, cognitive, occupational, and spiritual (Hansen and Martner, 1990).

The Program Performance Standards outline the objectives of the mental health portion of the Health Component (§1304.3-7). These objectives include:

(6,34)Promoting emotional, cognitive, and social development as they relate to the overall goal of social competence;

(6,34)Meeting the mental health needs of handicapped children and those with other special needs;

(6,34)Promoting staff and parent understanding of child growth and development;

(6,34)Emphasizing prevention, early identification, and early intervention for children with problems that may hinder normal development;

(6,34)Encouraging positive attitudes among staff and parents regarding mental health issues within the program; and

(6,34)Mobilizing community resources to serve the children and their families.

As part of this philosophy, individual staff have a significant role in working with families to ensure that children receive mental health screenings and, if necessary, treatment services. The actual program requirements for the mental health domain are detailed in the Program Performance Standards (§1304.3-8). These Standards require that a trained mental health professional be available to each program to provide the following services:

(6,34)Assist in planning mental health activities;

(6,34)Train staff and provide education to parents about mental health issues;

(6,34)Observe and perform screenings for classrooms or for individual children;

(6,34)Assist parents and staff in treatment activities; and

(6,34)Facilitate linkages with community mental health resources.

This professional does not have to fill the role of Mental Health Coordinator, and may be available on a consultant basis. The accompanying guidance to the Program Performance Standards provides a list of mental health professionals who would be appropriate (e.g., a child psychiatrist, a licensed psychologist, a psychiatric nurse, or a psychiatric social worker).

Recently, a report on the mental health aspects of Head Start was completed by the Task Force on Head Start and Mental Health for the American Orthopsychiatric Association (AOA, 1994). The report, entitled "Strengthening Mental Health in Head Start: Pathways to Quality Improvement," described the current state of the mental health aspects of Head Start, and contained a number of important recommendations for Head Start based on its assessment of the current state of activities addressing mental health within the program. The Task Force's report described the mental health program in terms of the diversity and complexity of the needs of Head Start families, particularly as changes take place in many of the local communities served by Head Start (e.g., increased violence, reductions in available services). The Task Force also noted the need to update how mental health issues are addressed in the Program Performance Standards. It expressed concerns about the limited and traditional strategies that are employed, inadequate staffing, organizational and fiscal constraints on the provision of family support and mental health services, a lack of focus on the dissemination of appropriate mental health information to parents and staff, and a record of inconsistency in collaboration between Head Start and other Federal programs.

The Task Force's recommendations included updating the Program Performance Standards and the associated monitoring tools, increasing the training and technical assistance

related to family support and mental health, expansion of staff at the local level with family support and mental health expertise, providing incentives and opportunities for local programs to strengthen family support and mental health activities, and increasing collaboration between Head Start and the family support/mental health community at all levels. It also indicated that Head Start should be contributing to the overall knowledge base regarding family support and mental health services for young children and their families.

One avenue for expanding the delivery of mental health services to children is by covering the cost of mental health services through Medicaid. Part of the service brokering role of the Head Start health staff is the determination of how Medicaid can be used and which providers are eligible for reimbursement. Mental health screenings, evaluations, and services are specifically listed under the Federal regulations overseeing the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) program. Unfortunately, the limited use of EPSDT for mental health services for children indicates that most States fail to take advantage of this funding opportunity (Fox, Wicks, McManus & Kelly, 1993).

10.2 Findings

The prevalence of mental health conditions noted among children in the study sample, both in parents' reports and in the child health files, is presented in this chapter. Percentages based on the parent interviews and reviews of the child health files are presented as weighted estimates (see Chapter 3: Methodology), unless noted otherwise. Percentages based on the Mental Health Coordinator interviews are reported unweighted.

10.2.1 Issues Encountered While Studying the Mental Health Domain

Definitions. The mental health domain was the most difficult aspect of the Health Component to study. One reason may have been the lack of clarity among staff and parents regarding the scope of the mental health domain and its place within Head Start. As noted by Hansen and Martner (1990), mental health is defined by people in two ways. The first refers to the normal developmental processes of children, while the second is focused on mental illness. In a blending of these two perspectives, the AOA Task Force (1994) defined mental health within the Head Start context as "promoting the healthy emotional development of children, supporting family strengths, identifying early signs of emotional and behavioral difficulty in children, and assisting families with special needs." The AOA Task Force also cited practices found at some Head Start programs in which mental health problems are deliberately identified as developmental concerns rather than specific mental health problems. This is done to minimize potential concerns related to the stigma of having mental health conditions listed in files which are available to Head Start staff or forwarded to the new schools when children leave Head Start.

Within these contexts, parents were likely to report developmental conditions (e.g., speech and language delays) and mental health conditions (e.g., behavioral problems) as part of the serious **medical** health conditions faced by their children. Parents also included findings from their children's medical examinations as part of their responses on mental health screenings or developmental assessment reports. This problem was compounded by a sensitivity on the part of the research staff to avoid the potential negative impact from the misuse or misinterpretation by parents of the phrase "mental health problem." While the parent interview was designed to minimize parental discomfort and improve responses by emphasizing developmental assessments rather than mental health problems, there was no way to be sure how parents were defining specific terms when providing their responses.

Terminology. The differences between group screenings (observations of classroom or socialization group activities) and individual screenings is also a topic which appeared unclear among the respondents. While no data were collected to support this notion

specifically, the observations of the interviewers suggested that there was a lack of consistency among staff within a program and between parents and staff as to what screenings and assessments entailed. It was also apparent that many parents were not aware that a group screenings occurred unless the screening detected a potential problem that required further evaluation. Addressing this misunderstanding should be an important function of future studies of the mental health domain.

Record Keeping. As noted by the AOA Task Force (1994), many programs make strong efforts to assure the confidentiality of mental health records in order to minimize the potential stigma that could come from misinterpretation of the reports on mental health screenings and examinations. This practice resulted in a number of difficulties in the collection and interpretation of information related to mental health issues for this study. Even if the appropriate documentation was made in a child's file, there was no standard place across programs for mental health professionals or other staff to document conditions and the status of treatments. Documentation in the health files related to screenings and examinations was often not complete, while other times the relevant documents were placed in an education file or in a completely separate mental health file to which the research team did not have access. Often this happened when children's records were held in alternate sites. The implication of these practices for this and other studies is the lack of useful information in children's health records, particularly with regard to treatment issues (see Chapter 3: Methodology).

10.2.2 Staffing the Mental Health Domain

The Mental Health Coordinators overseeing the mental health domain did not generally devote full time to this area. Of the 37 Mental Health Coordinators interviewed, 78.4% indicated that they had other responsibilities. Those with multiple roles reported that they spent an average of only 26.2% of their paid time as Mental Health Coordinator.

In addition, only 37.8% of all the Mental Health Coordinators reported experience providing mental health services to children or families prior to working in Head Start. Their

experience was predominantly in providing child counseling or therapy (21.6%) and providing family counseling or therapy (16.2%). Child- or family-related mental health training was received by 78.4% of the Mental Health Coordinators between the beginning of the program year (September 1993) and the time of the interviews. The mean time spent as Mental Health Coordinator was 4.9 years (range = 1 to 19 years). As noted in Chapter 4, the Mental Health Coordinators had the highest percentage of college or graduate degrees among the health staff.

Head Start staff at all levels from the National and Regional Offices to the programs and the centers have a great need for additional information on the mental health of preschool children (AOA, 1994). The staffing of the mental health domain was a major concern addressed in the AOA Report (1994). The Task Force noted that there is a limited pool of potential staff with the expertise required by Head Start and commented on the need for additional training for both Mental Health Coordinators and Head Start staff in general to help address this situation.

10.2.3 Perceived Mental Health Problems

The Mental Health Coordinators' reports on serious mental health conditions they face within their programs (see Exhibit 10-1) typically included behavior disorders, which were mentioned by almost 50% of the respondents. Other categories, each mentioned by approximately one quarter of the Mental Health Coordinators, were hyperactivity or Attention Deficit Disorder (ADD), family discontinuity (change), physical or sexual abuse, and children suffering the impact of substance abuse by others. A further breakdown of the behavior disorders category indicates that aggressive behaviors, discipline problems, and withdrawal were clearly the most frequent conditions reported in this category.

Exhibit 10-1 The Most Serious Mental Health Conditions as Reported by the Mental Health Coordinators

Condition	Percent
Behavior Disorders	48.6
Hyperactivity/ADD	27.0
Discontinuity/Change Within a Family	27.0
Physical/Sexual Abuse	24.3
Effects of Substance Abuse by Others	24.3
Emotional Problems (General)	18.9
Depression (Child)	8.1
Domestic Violence	8.1
Community Violence	5.4
Post Traumatic Stress	5.4
N	**37**

Note: The question was open-ended.

10.2.4 Screenings and Assessments

Health Histories. The Mental Health Coordinators were asked about the use of different sources of information to obtain mental health histories for the children. Over 91% of Mental Health Coordinators reported that interviews or oral histories from the parents were the primary sources of information used to obtain health histories. Written records from previous health providers and written histories from parents were each reported by 51.3% of the Mental Health Coordinators as sources of information.

Individual Screenings. Almost ninety percent (89.2%) of the Mental Health Coordinators reported that some children received individual mental health or developmental screenings, if necessary. For both formal and informal individual screenings, 45.9% of Mental

Health Coordinators reported that teachers referred children to the program's mental health consultant, and 24.3% reported that the teacher actually conducted the screening. The screening instruments most often mentioned in relation to individual screenings included: the Brigance Preschool Screen for 3- and 4-Year-Olds, the Chicago Early Assessment Individualized Education Program, and the Denver II. A summary of the screening tests cited in the health files is provided in Exhibit 10-2. As can be seen from the listing, most of these screening instruments are general developmental screens rather than instruments designed specifically to address mental health issues.

Mental Health Coordinators were questioned about the methods used to disseminate information to the parents regarding upcoming screenings, as well as how often efforts were made to encourage parents to attend the screenings. Most information regarding the time and place of screening tests was provided to the parents directly, through telephone calls (81.1%), home visits (51.3%), or during discussions held at the center when the parent came to drop off or to pick up a child (51.3%). Less direct methods included sending letters to the parents with the children (43.2%) or mailing letters to the home (24.3%).

Exhibit 10-2 Screening Methods or Instruments Used in the Developmental Assessments as Noted in the Child Health Records

Arizona Articulation Proficiency Scale (AAPS)	Expressive One Word Picture Vocabulary Test
Battelle Developmental Inventory (BDI)	Fluharty Preschool Language Screening Test
Brigance Preschool Screen for 3-and 4-year olds	Mental Health Screening
Carolina Development Profile	Observation of Speech and Hearing
Chicago Early Assessment	Observation of the Mental Health of Preschool Aged Kids
Child Observation Assessment	Oral Language Sentence Imitation Screening
Child's Individual Development Profile	Portage Guide to Early Education Checklist
CIP Speech and Expressive Language Record	Preschool Brief Development Screenings
Communication Screening	Preschool Language Scale (PLS)
Comparison of Maladaptive Behavior	Preschool Picture Vocabulary Test
Creative Curriculum Developmental Learning Checklist	Preschool Behavior Questions
Davis Observational Checklist for Texas (DOCT)	Speech/Language Prescreening
Denver (II)	Structured Photographic Expressive Language Test
Developmental Assessment Screening Observation Form	Subjective Child Observation Report (SCOR)
DIAL R (now changed to First Step Speech)	Teacher made instrument
Evaluation of the Developmental Aspects of the Child	Visual Motor Integration- Berry

Head Start staff often seek to encourage parents to attend their children's individual mental health or developmental screenings. The most common methods used to encourage parents to accompany their children to the mental health screening was to provide information about the screening (91.9%), schedule the screenings at times that accommodate the parents' schedules (83.8%), provide screenings on-site (67.5%), provide transportation (64.8%), and discuss screenings during home visits to the families (59.4%).

A summary of the services related to mental health which are provided by programs is found in Exhibit 10-3. The responses indicate a higher level of support for informing parents

and arranging services with providers than for follow-up efforts to ensure that families actually receive services.

Group Screenings. As noted earlier, 70.3% of the Mental Health Coordinators reported that all children in the program routinely were observed as part of a group-administered mental health screening. Group screenings, which are observations of classroom or socialization activities, were most often conducted by a program's mental health professional or the classroom's head teacher. When asked how involved they were with the mental health screening and examination planning process (e.g., helping to select providers, scheduling visit time), 56.8% of the Mental Health Coordinators said they were very involved, 27.0% were somewhat involved, and 16.2% were not very involved. In conducting the actual screenings, the individuals most likely to be involved were teachers (86.1%), parents (75.6%), outside mental health professionals (75.6%), and Mental Health Coordinators (64.9%). It was not clear what role parents played in the screenings; they may be involved in contributing to the documentation of the mental health history for their children.

Mental Health Coordinators were also asked about the frequency of routinely using formal and informal screening procedures with the children. Programs were reported to frequently or always use informal screenings (75.6%), a combination of both formal and informal screenings (62.1%), and formal screening assessments (54.0%) on a routine basis. It was reported that 32.4% of the Mental Health Coordinators were primarily responsible for documenting follow-up evaluations in the child's health file while Health Coordinators (21.6%), mental health professionals (10.8%), Center Directors (5.4%), and teachers (5.4%) were also responsible for documenting follow-up activities in some programs.

Exhibit 10-3 Mental Health Services Frequently or Always Provided by Programs as Reported by the Mental Health Coordinators

Service	Percent
Inform Parents of Service Needs Suggested by Screenings and Examinations	100.0
Inform Parents of Available Treatment Services	100.0
Identify Service Providers	100.0
Follow-up to Ensure Services Were Provided	97.3
Help Parents to Understand What Mental Health Services are Available for Preschool Children	91.9
Coordinate Service Arrangements with Parents	78.4
Arrange Services with Providers	72.9
Arrange Transportation	50.0
Help Families Enroll in Medicaid	50.0
Inform Parents of Payment Options	48.6
Arrange Payment with Providers	45.9
Arrange for Interpreters to Accompany Families to Treatment	38.9
Provide Escorts for Families	34.3
Arrange Child Care	27.0
N	**37**

Parent Reports. Researchers attempted to be sensitive to the concerns of mental health "labeling" when interviewing the parents. Terms such as "mental health" were not emphasized; rather, processes were described as developmental assessments, using words that were less stigmatizing and stressed Head Start's focus on fostering normal child development. The interview forms were designed to ask questions of parents using terminology that program staff were also likely to use. Parents were informed that a developmental assessment might include screening and evaluation of any of the following:

- Physical coordination and development;
- Intellectual development;
- Emotional development;

- Social development;
- Psychological development; and
- Behavior.

Within this framework, parents were asked the following questions regarding the health of their children:

- Since being in Head Start, has anyone from the center suggested that your child be evaluated for possible problems with his/her behavior or feelings?
- How were you informed of this suggestion? Did Head Start ask for your permission to conduct a developmental assessment? How was permission provided?
- Was the developmental assessment completed for your child?
- Were you invited to attend the developmental assessment? Did you attend the assessment? Were the results of the assessment explained to you?

Only 6.9% of parents (n=82) reported that someone from the center had suggested their children be evaluated for possible problems with behavior or feelings. Information on how parents were informed of this suggestion was gathered from the parents who actually received recommendations that their children be evaluated. The information came primarily from two sources: telephone calls from Head Start staff (20.0%) and parent notification by staff during individual discussions when parents visited the center to pick up or drop off their children (29.3%).

Parent Involvement. Of these 82 parents who said that a developmental assessment was recommended for their children, 71.0% said the Head Start staff specifically asked for their permission to conduct the assessment. Of these parents (n=58), 53.1% responded that they gave written permission and 33.6% gave permission verbally. The developmental assessment was completed for 62.2% (n=51) of the children for whom it was recommended. For children with a completed assessment, 73.8% (n=38) of the parents reported that they

were invited to attend the assessment and 58.8% (n=30) actually attended. The majority of the parents responded that the assessment indicated a need for treatment services (60.8%, n=31). Of parents who actually attended the assessment (n=30), 93.6% said that the results of the assessment were explained to them.

10.2.5 Conditions

Summary Procedures. Parents who indicated that their children had a developmental assessment (n=51) were asked the following:

- Please indicate each condition you were told about following the developmental assessment.

These responses were coded into summary categories to determine the reported prevalence of specific mental health or developmental problems. As noted, referral and follow-up information on mental health assessments or developmental assessments were often not available in the child health files that were reviewed for this study. Program record-keeping issues and confidentiality concerns regarding the documentation of mental health information were discussed earlier in this chapter and in Chapter 3: Methodology.

Conditions Across Parent Interviews and Review of the Health Files. Only 4.3% of all the parents (n=51) reported that their children had received a developmental assessment, and 2.6% of all parents (n=31) reported that the assessment had identified a specific problem. This is slightly higher than the 0.5% rate reported by the AOA Task Force (1994). However, as noted in previous chapters, parents' reports tend to have higher incidence rates for conditions than Head Start records, possibly as a result of the emphasis on overall development. The most common problems reported by this small group of parents were speech and hearing problems (40.8%), cognitive or developmental delays (29.8%), emotional disorders (25.3%), social behavior problems (15.8%), and hyperactivity or ADD/ADHD (13.3%).

When the parents' responses across the entire interview were reviewed (using reports of medical conditions and of mental health conditions noted in the developmental assessments), mental health conditions were noted by 12.5% of the parents, with multiple conditions being found for less than 2.0% of the children. These conditions included reports of speech and language problems.

The review of the children's files indicated that 51.8% of the children had a record of a developmental assessment. As indicated in section 10.2.1, problems with incomplete records and access to all necessary files, as well as confidentiality issues, make estimates of mental health conditions in the overall population problematic. Mental health conditions were noted in 3.9% of the files, with multiple conditions noted in only 0.3% of the files. Although the frequencies of mental health conditions were low for both parents' reports and the file abstractions, in only 16 cases, or approximately 1.0% of all children, did both the parent and the health record provide evidence of a mental health condition for the same child.

10.2.6 Treatments

Sources of Data. Parents who indicated that their children had developmental assessments also indicated the treatments and the status of these treatments. As noted, such information was not always available consistently across the child health files.

Treatments. The treatments that parents reported are found in Exhibit 10-4 and the status of these treatments is found in Exhibit 10-5. The most common treatment reported by parents (n=42) was speech therapy (33.5%), followed by psychotherapy (29.8%) and special education (28.2%).

Mental Health Coordinators were asked how often parents and teachers were given instructions by mental health professionals in "child guidance techniques for children receiving mental health services." Approximately four out of five Mental Health Coordinators indicated

that this type of training was provided frequently or always (78.3% for parent instruction and 81.0% for teacher instruction) by their program.

Exhibit 10-4 Treatments for Conditions Noted During Developmental Assessments or Mental Health Screenings as Reported by Parents

Treatment	Unweighted n	Weighted Percent
Speech Therapy	13	33.5
Psychotherapy	11	29.8
Special Education	10	28.2
Other	3	11.0
Medication	3	7.4
Not Specified	2	6.1
n	**42***	

*Sample size is based on 42 mental health conditions reported by 31 parents whose children had one or more mental health conditions reported during a developmental assessment or mental health screening.

Exhibit 10-5 The Status of Mental Health Treatments as Reported by Parents

Treatment	Unweighted n	Weighted Percent
Treatment in Progress/Ongoing	26	50.2
Not Specified	9	35.6
Treatment Completed	7	14.2
n	**42***	

*Sample size is based on 42 mental health conditions reported by 31 parents whose children had one or more mental health conditions reported during a developmental assessment or mental health screening.

Adherence to Treatment. Parents indicated that the majority of the mental health treatments were in progress or ongoing (50.2%). As was stated previously, similar information was not available from the child health files. As noted previously, documentation of mental health treatments and compliance was generally not complete in the child health file or may have been kept in other sections of the child's file which were not accessible to the researchers (see Chapter 3: Methodology).

10.3 Summary

The difficulties highlighted in studying the mental health domain (e.g., definitions and terminology, record keeping practices, confidentiality) should have important implications for continued research efforts directed towards children's mental health. The information that was available does not paint a true picture of the mental health status of Head Start children or of services provided to them. While findings are summarized below, it is clear from this study as well as from the work of the AOA Task Force (1994) that there is another level of untapped information on how the mental health domain operates and serves children.

(6,34)More than three fourths of the Mental Health Coordinators had other paid responsibilities within Head Start, and only about one-quarter of their time was spent focusing in the mental health domain.

(6,34)Approximately two thirds of the Mental Health Coordinators responded that individuals frequently or always involved in mental health screenings were teachers, parents, outside mental health professionals, and the Mental Health Coordinator.

(6,34)Approximately 70% of the Mental Health Coordinators said that all children in the program routinely received a group administered mental health or developmental screening and almost 90% reported that children in the program may receive individual mental health screenings.

(6,34)When asked about the mental health of their children, less than 7% of the parents reported that someone from the Head Start center had suggested their children be evaluated for possible behavior problems.

(6,34)Only 2.6% of the parents reported that a developmental assessment had found a specific problem. These were likely to be speech and hearing problems, cognitive or developmental delay, and emotional disorders. Many parents listed speech and hearing concerns under medical problems.

(6,34)The most common treatments following a child's mental health examination or developmental assessment, each reported by one third of the parents in each case, were speech therapy, psychotherapy, and special education. Parents indicated that one half of the mental health treatments were in progress or ongoing.

11.0 THE NUTRITION DOMAIN

11.1 Overview

The link between health and nutrition is well recognized. Poor nutrition during childhood can have lifelong effects on the health and functioning of an individual. Nutrition problems (e.g., iron deficiency anemia) are often associated with poverty. Children from low-income families are generally found to have lower values than other children for height, weight, and triceps skinfold thickness (Rosenbaum, 1992). Poor nutrition contributes to childhood obesity in instances where low cost food, often high in fats and caloric content, is the obvious choice over no food at all. Studies of growth trends among low-income children have provided some mixed results and suggest the need for targeted research in this area.

The Second National Health and Nutrition Examination Survey (NHANES II) data indicated that low-income children (ages 6 months to 10 years) have a greater prevalence of low height for age; however, these children were not more likely to be overweight than children from middle-class families (Yip, Scanlon & Trowbridge, 1993). However, data on low-income, school-age children and adolescents included in the Center for Disease Control and Prevention's Pediatric Nutrition Surveillance System indicate that they had a greater prevalence of obesity than their counterparts in the middle-class population (Yip et al., 1993).

Head Start plays a significant role in working with families to ensure that children receive nutrition screenings and treatments when necessary. The Head Start program requirements for nutrition screenings and services are detailed in the Program Performance Standards (§1304.3-10). The Standards list the main nutrition objectives as the following:

- Promote physical, emotional, and social growth and development through the provision of food;
- Use feeding situations for educational purposes;

- Educate children, families, and staff on the relationship between nutrition and health, and on the development of sound nutritional habits;
- Demonstrate the impact of nutrition on other Head Start program activities and on overall child development; and
- Engage parents, staff, and the community in identifying the nutritional needs of Head Start children and their families.

These goals are met through nutrition assessments (height, weight, hemoglobin/hematocrit), the collection of information on individual child and family eating habits, and assessments of community nutrition needs.

In order to assure a degree of good nutrition for enrolled children, the Program Performance Standards also require that children in part-day programs receive meals and snacks which provide at least one third of the children's daily nutrition needs. For children attending full-day programs, the required proportion increases to between one half and two thirds of the daily nutritional needs. Meals are also expected to contribute to the overall socialization experience of the children. The Standards require that if the nutrition services are not overseen by a qualified nutritionist, that one be used to provide an ongoing review of the meals and nutrition services provided by the program.

The prevalence of each nutrition-related health condition noted among children in the study sample, both in the parents' reports and in the child health files, are presented in this chapter. Subsequent to the findings of the nutrition screenings, the Program Performance Standards require that Head Start programs provide or arrange for treatment where necessary (§1304.3-4), much as they do when conditions are noted within the other health domains.

11.2 Findings

In this chapter, percentages based on data from the parent interviews and the reviews of the child health files are presented as weighted estimates (see Chapter 3: Methodology), unless noted otherwise. Percentages using the Nutrition Coordinator's interviews are reported unweighted.

11.2.1 Screenings

Of the 39 Nutrition Coordinators who completed an interview, 87.2% reported that children enrolled in their Head Start Program received individual nutrition screenings, although such screenings are not required by the Program Performance Standards. It was not indicated whether all children served by these Nutrition Coordinators received such screenings.

Staff Reports. Exhibit 11-1 lists nutrition-related screening tests and whether or not they are included as part of each child's physical examination as reported by the Health Coordinators. Since it was possible for the Health Coordinators to answer that the screening tests were both part of the initial physical examination and provided separately, the categories in Exhibit 11-1 are not mutually exclusive. Virtually all the programs collect height and weight measurements and hemoglobin/hematocrit results.

11.2.2 Conditions

The nutrition conditions reported in this section are those which parents reported had been identified during the initial screenings or examinations required for entry into Head Start, and through subsequent tests that were not part of the initial screening or examination. The child health files were a second source of information on nutrition conditions.

Exhibit 11-1 Screening Tests and Their Inclusion in the Physical Examination as Reported by the Health Coordinators

	Percent		
	Test Is Part of the Physical Examination	Test Is Provided Separately From Physical Examination	Test Is Not Provided At All
Height and Weight Measurement	76.2	38.1	0.0
Hemoglobin/Hematocrit Testing	73.8	31.0	7.1

Note: N=42 Health Coordinators. Health Coordinators could report tests being both part of the initial physical examination and as subsequent screening tests.

Parent reports of medical problems included several health conditions related to nutrition. Obesity was mentioned for 1.3% of the children, being underweight was noted for 0.8%, and general nutrition concerns were reported by 3.7% of the parents. On the Head Start Child Health Record, the nutrition section includes a review of the child's status concerning nutrition. A summary of these status reports is included in Exhibit 11-2. The most reported nutrition concern in the health files was the suspicion of dietary problems or inadequate food intake, but this was noted in a relatively small percentage of records (5.3%).

While the percentages for these conditions were low (all criteria were noted for about 5% or less of the children), programs not using the updated Head Start health forms for data management often did not have space to specifically note nutrition conditions. Therefore, nutrition-based conditions may be under-reported in the child health files. However, note that these conditions, in contrast to medical and dental conditions, were reported more frequently in the health files than by the parents.

Exhibit 11-2 Nutrition Referrals Noted in the Child Health Files

Criteria for Referral	Unweighted n	Weighted Percent
Suspicion of Dietary Problem or Inadequate Food Intake	67	5.3
Hemoglobin Less Than 11 Grams or Hematocrit Less Than 34%	46	3.9
Overweight	35	3.0
Weight for Height Greater or Less Than Typical	31	2.6
Underweight	28	2.2
Short for Age	18	1.5
N		**1,189**

Note: The categories are not mutually exclusive

11.2.3 General Status

Height and Weight. Height and weight measurements are often indicative of the physical and nutritional health status of children, and should be regularly assessed according to the health guidelines of the Program Performance Standards. Many programs maintained height and weight records on growth charts similar to those found in the Head Start Child Health Record (1992 version). Height charts were found for 65.0% of the children, weight charts for 64.5%, and height by weight charts in 54.2% of the files. The mean height for the children was 41.0 inches (standard deviation (sd) = 3.2 in), and the mean weight was 39.0 lbs (sd = 7.7 lbs). Comparisons with national standards indicate that 10.2% and 11.6% of the Head Start children were above the 95th percentile for height (by age) and weight (by age), respectively. Further comparisons show that 6.7% of the children were below the 5th percentile for height (by age) and that 5.3% were below for weight (by age). There were

11.2% children above the 95th percentile for weight by height, while 3.8% were below the 5th percentile.

Hematocrit/Hemoglobin Screenings. Hematocrit and hemoglobin screening test results are presented in Exhibit 11-3. According to the child health files, 44% of the children had a hematocrit and 36% had a hemoglobin test to screen for anemia. The remaining 19% either had no test or had a test that was not recorded in the child's health file. The mean hematocrit was 36.5%, with 11.5% of the children having a hematocrit less than 34%. For hemoglobin, the mean was 12.7 grams, and 8.4% of the children had a hemoglobin level less than 11 grams. Low levels are usually indicative of children requiring nutrition screenings and services. However, data were not typically available to determine whether the children with these low levels received nutrition screening and services.

Exhibit 11-3 Findings From Screening Tests Reported in the Child Health Files: Hematocrit and Hemoglobin

	Children Who Had Test Performed		Test Results	Tested Children with Undesirable Levels*	
Type of Screening Test	Unweighted n	Weighted Percent	Mean	Unweighted n	Weighted Percent
Hematocrit	506	44.0	36.54%	58	11.5
Hemoglobin	447	36.0	12.68 grams	37	8.4

*Hematocrit less than 34%, Hemoglobin less than 11 grams.

11.2.4 Treatments

As noted, nutrition conditions and treatments were reported during the parent interviews as part of the questions asked about medical conditions and treatments. Parents were asked what treatments were recommended for identified health conditions and the status of these treatments (completed, in progress or ongoing, not stated, or did not seek treatment). Conditions

and treatments also were available from the child health files, but there were no parallel questions between the parent reports and the health files that can be compared. Identified nutrition-related conditions reported by the parents included being underweight and having digestive problems or eating problems. It was not possible to identify treatments specific to these nutrition problems or to determine the status of these treatments, except for nutritional or dietary alterations. Such alterations were recommended for 10.9% of the treatments resulting from the initial examination, for 12.9% of the conditions identified during subsequent tests, and for 5.5% of the conditions reported in child health files. In reviewing the treatments mentioned by the parents, it was not clear which type of dietary alterations were for which specific nutrition conditions, therefore, adherence with these specific treatments could not be determined.

When children needed nutrition services, over half of the Nutrition Coordinators reported that they most frequently used cooking activities (69.3%), dietary restrictions (69.2%), diet management (53.8%), and parent education (51.3%) as methods for meeting these needs (see Chapter 6: Health Education).

11.2.5 Head Start Meals

The meals and snacks provided at Head Start serve a variety of purposes. Beyond meeting nutritional needs through the provision of healthful foods, the Program Performance Standards also direct staff to use meals to integrate education and socialization opportunities (§1304.3-10) into the classroom routine. Meals provided the research staff in this study with an opportunity to observe nutrition education across all of the study sites. The education activities associated with Head Start meals were discussed earlier in Chapter 6: Health Education.

It was observed that meals provided a great opportunity for exchanging nutrition information with the children, and that children took an active role in activities around the meals (e.g., washing hands, setting the tables).

Head Start staff were observed sitting with the children for 97.2% of the meals, and 87.6% of the time they ate with the children. This suggests an excellent opportunity for staff to offer nutrition information to the children. Usually through family style service, children had a hand in serving themselves 68.4% of the time. At 61.4% of the meals, staff were observed providing children with information about the foods on the table. Children were encouraged to take the available foods 74.6% of the time, and were encouraged by staff to taste specific foods at 77.7% of the meals. Classroom discussions about the meals were observed 36.4% of the time. While nutritional content is another important issue to be assessed, the measurement of this aspect of the meals was beyond the scope and resources of this study. Currently, the nutritional content of Head Start meals is being studied by Abt Associates under contract a with the United States Department of Agriculture (USDA) (The Early Childhood and Childcare Study, USDA, Contract Number 53-3198-3-018).

11.3 Summary

Activities related to the provision of nutrition screenings provided or arranged for by Head Start programs were reported. The highlights of responses are presented below.

- Almost 90% of the Nutrition Coordinators reported that all children enrolled in Head Start received individual nutrition screenings.
- Nutrition summaries were available in some of the child health files. Approximately 5% of the children were described as being in need of nutrition services. Very few parents (less than 5%) reported their child being obese or underweight as a health condition.
- Meals were observed to provide an excellent opportunity for teaching children about nutrition. At least one hot meal is required each day.

12.0 SUMMARY AND RECOMMENDATIONS

12.1 Overview

The purpose of this study was to provide a "national snapshot" of how local Head Start centers implement the Health Component of their programs to meet the medical, dental, nutrition, and mental health needs of the children and families that they serve. As noted in the *Head Start Research and Evaluation Report: A Blueprint for the Future* (1990), the Head Start Bureau needs information on how local programs implement the mandated activities in the health section of the Program Performance Standards (§ 1304.3) prior to making policy decisions on how to support the efforts of these programs.

The final pictures that develop from this effort reflect a program that brokers health services and assists families in developing the skills to meet their future health needs. While this study was not designed to measure the impact or effectiveness of the Health Component activities at the participating sites, it does highlight a range of ongoing health-related activities, provides important data on the health status of Head Start children, and establishes a sound base for future research and evaluation efforts focusing on the Health Component. This Final Report includes a summary of the historical context of the Health Component, a detailed review of the study methodology, and descriptive findings covering the following aspects of the Health Component:

- Health Component staff and their qualifications;
- Internal program procedures and linkages with communities;
- Preventive care (health education and immunizations); and
- A summary of screenings, examinations, conditions, and treatments across the four health domains of Head Start (medical, dental, mental health, and nutrition).

12.1.1 Study Background

From the very beginnings of Head Start more than 30 years ago, the program developers viewed "social competence" as being the result of facilitating development in many areas, not just education. This notion was made clear in the original *Recommendations for a Head Start Program* (Cooke, 1965) which set the vision for what Head Start has become today and has been reinforced through the work of Edward Zigler and his colleagues (Zigler et al., 1994). As part of this perspective, Head Start has always recognized the relationship between children's health and their ability to learn. Head Start is committed to a policy of ensuring that children who participate in the program enter school with no undetected health conditions that might impair their potential for success.

The program's Health Component objectives, detailed in the Program Performance Standards (Head Start Bureau, 1992), are to arrange or facilitate health screenings, diagnoses, and treatments across the domains of medical, dental, mental health and nutrition conditions and to provide parents with the information they need to ensure that their children obtain appropriate health services, both while attending Head Start and after leaving the program. Within this two-generational program, the Health Component staff use health education both in and out of the classroom to better prepare children and their families to maintain proper health and well being after they leave Head Start.

As noted in the most recent re-authorization legislation (1994) and in the *Final Report of the Advisory Committee on Head Start Quality and Expansion* (1993), Head Start needs to develop policies and procedures that are responsive to the population of families and conditions faced by local programs. In order to accomplish this goal, program decision-makers require accurate and up-to-date information on which to base policy. This descriptive study was undertaken because little current information was available regarding program procedures and how they address the health conditions that are common among Head Start children. There was also a lack of information concerning community health risks faced by families participating in Head Start, and about the health resources available in communities served by Head Start.

12.1.2 Study Procedures

This descriptive study was conducted with a national probability sample of 40 Head Start programs across 23 States and Territories to find out how programs are implementing the Health Component. The programs were selected as part of a random sample stratified on the basis of three variables—Geographic Region (Northeast, Midwest, South, and West), Urbanicity (whether or not the Head Start program office zip code was located inside an Urbanized Area), and the percentage of minority children (greater than or equal to 50% minority enrollment versus less than 50% minority enrollment). Across these 40 programs, data were collected on 1,189 children from 81 Head Start centers.

The primary objective of the sampling design was to provide a national probability sample of children enrolled in Head Start. This allowed the child-level data to be weighted for the purpose of providing valid, national estimates (see Chapter 3: Methodology). Because this is a descriptive study in which data were collected at one point in time (the Spring of 1994), outcome measures that focus on the causal relationship between changes in health and the use of specific health services over time as the result of Head Start participation were not possible.

All data were collected during the Spring of 1994, at the end of the Head Start program year. During the site visits, which had durations of between one and two weeks each, the research staff interviewed approximately 200 Head Start staff responsible for the administration and implementation of their program's Health Component. These staff included Health, Mental Health, Nutrition, and Parent Involvement Coordinators as well as Center Directors. Researchers interviewed Head Start parents regarding their children's health status and their use of health services, and then reviewed the Head Start health records for these children. Observations of 177 Head Start meals (breakfast, lunch, snacks) also were completed during the site visits.

12.2 A Review of the Key Study Findings

This section summarizes the key study findings. These findings are discussed in terms of responses to questions adapted from the original research questions which drove the development of the study (see Chapter 1: Introduction).

12.2.1 What Are the Qualifications of the Health Component Staff?

Head Start programs are supported by staff from a broad range of backgrounds, and include a number of individuals who spent many years working within Head Start and have moved up into and through various positions within the Health Component. Depending on the position, staff reported being in their current positions for between 5 and 7 years. No less than one half of each of the Coordinators interviewed (Health, Mental Health, Nutrition, and Parent Involvement) reported having multiple roles within their program. This situation was most likely to occur within the smaller programs (fewer than 500 children enrolled).

Generally, about one third of the Health Coordinators held college degrees or higher, and nearly another one third held nursing diplomas without a degree. Coordinators from smaller programs (fewer than 500 children enrolled) were generally less likely to have Bachelor's or nursing degrees. The highest percentage of graduate degrees was found among the Mental Health Coordinators. The Health Coordinators held the highest number of special certificates among the staff interviewed, with a high concentration of these being nursing-related certificates or licenses.

12.2.2 What Kinds of Training Do the Health Component Staff Receive?

Training for Health Coordinators and their staff is one potential area for evaluating Head Start support for local programs. A majority of Health Coordinators reported that they had received training during the past year on a number of child development, health, and family-related topics, either from other program staff or from local consultants or community providers. More than half of the Health Coordinators reported having received training in the

past year on the following topics: substance abuse, child neglect/abuse, disabilities, first aid/safety, children with special needs, CPR, general health, child growth and development, nutrition, family violence, universal precautions, mental health, dental health, social-emotional development, and eating habits.

12.2.3 What Are the Primary Community Health Risk Factors Faced by Head Start Programs?

The major community health risk factors that programs must address daily were noted during interviews with Head Start staff. The primary risk factors included substance abuse, lack of parenting skills, lack of available support services for families, poor nutrition, and poverty. Child abuse and neglect and community violence also were mentioned, particularly by staff responsible for mental health services. Virtually all of the program staff noted that parent education and community outreach activities are provided to address specific community risk factors.

12.2.4 How Does Head Start Provide or Access Health Services for Children and Their Families?

Broad-based procedures for involving parents in obtaining the health services their children need include providing general information on Head Start supported activities, either at intake, at parent meetings, or through newsletters. Occasionally, circumstances dictate that specific parents need to be notified privately, either through telephone calls, letters sent home with the children, or discussions at home or at the center. Most Parent Involvement Coordinators reported that they encouraged parents to attend health screenings by scheduling screening times to accommodate parents' schedules, by providing more on-site screenings, and by providing transportation when necessary. Obtaining parental consent for screenings and examinations was not a problem in most cases.

Medicaid is the primary source of funding for health services for a majority (68%) of Head Start families. Almost nine out of ten (85.7%) Health Coordinators reported that their

programs had a formal process for identifying Medicaid-eligible children enrolled in their programs. This process generally included screening for eligible children at intake, verifying proof of income, and referring eligible children to social services for assistance in the Medicaid enrollment process. Health Coordinators generally reported that staff explain the Medicaid program to parents and encourage them to enroll. Staff may then either make appointments and take parents to the Medicaid agency or simply refer the parents to the local Medicaid agency.

12.2.5 What Health Services Are Provided at Head Start Centers?

The services most often provided at centers include informing parents of the health service needs of their children and of the treatment services that are available. Staff also reported that they identified specific health care providers for parents and helped coordinate arrangements for services with these providers. Many staff follow up with parents and providers through various means to ensure that the necessary services were actually provided, although this information is not always updated in the health files. Once again the picture that emerges is one of the Health Component staff serving as brokers of health services to link Head Start families with their community health care providers.

Health Coordinators reported that the types of treatment most often available on-site at the centers are nutritional counseling, speech therapy, mental health counseling, physical therapy, immunizations, and dental treatments (e.g., supplemental fluoride tablet program). In general, staff reported that they followed up on treatment by contacting the parents and providers directly, documenting the treatment in the child's health record, and periodically reviewing the record for completeness.

12.2.6 What Are the Community Resources That Are Used Most by Head Start Programs?

Each program is charged with the responsibility of linking with the service providers in their community and of being responsive to the needs of these communities. Head Start staff

reported that many services are provided by organizations, rather than individual providers. Examples of these organizations include public health agencies, private group providers, community mental health organizations, and public interest/service organizations. The services most often provided include medical screenings and services, vision screenings and eye care, immunization services, dental services, and nutrition and meal planning services.

Most of the parents reported receiving information from Head Start to facilitate their use of community services. This information was provided through both parent education activities and materials distributed during the enrollment process. The parents could also be informed on an individual basis as well, whenever specific services were needed.

12.2.7 How Do Other Federal and State Programs Play a Role in the Health Component?

It became apparent during the study that an important factor in the creation of community linkages is the active integration of Head Start with other Federal resources, such as Medicaid, the United States Department of Agriculture (USDA) (i.e., the school lunch program, the Women, Infants, and Children (WIC) program, and Temporary Assistance for Needy Families (TANF). In its work to assist families and foster the development of social competence among enrolled children, it is clear that Head Start does not work as a "stand alone" Federal program. Programs serving low-income families are interdependent, meaning that changes in one may affect service delivery in others. For example, Head Start depends on Medicaid/EPSDT (Early and Periodic Screening, Diagnostic, and Treatment program) to provide funding for health services for children, while Head Start has proven itself to be a resource for the Medicaid program by recruiting local health care providers to participate. Head Start's dependence on other Federal resources is at a point where cuts in these other resources would have a serious impact on how local Head Start health staff decide to allocate their limited resources.

12.2.8 How Are the Costs of Health Services Covered?

Based on interviews with parents, approximately two-thirds (68.1%) of the children in Head Start have the costs of their health services covered by Medicaid. Other sources of payment were private insurance and direct payments. Free care (not provided by Head Start) was reported by only a small percentage of parents. Of the Medicaid enrolled children, almost two thirds were enrolled at or near the time of their birth (1988-90) and an additional 21% became enrolled during the time they were participating in Head Start (1993-94).

The parents whose children were not covered by Medicaid indicated that they either had other insurance or that they were not eligible or both. Only a very small percentage of the parents indicated that they had not heard of Medicaid or did not understand how to enroll. The Head Start staff members routinely query parents about Medicaid enrollment at the time of Head Start enrollment, and facilitate Medicaid enrollment as needed. Head Start program funds are considered "the dollar of last resort," and are used to cover the cost of health services only when all other options have been explored and funds are still necessary.

12.2.9 What Are the Barriers to Obtaining Health Services for Head Start Children?

Based on the staff interviews, barriers to obtaining health services fall into three categories: community, personal, and internal to the program. In confronting community barriers, staff must address issues such as the lack of child care or transportation, the distance between families and providers, the costs of care, the lack of needed providers, and inconvenient provider schedules. Personal barriers most often reported included parental lack of understanding, parental resistance, lack of time for parents to obtain services, and cultural barriers. Internally, program staff reported a shortage of time and program resources to put into assisting families in overcoming barriers. However, each program reported active engagement in steps to assist families in overcoming their primary barriers to care.

12.2.10 How Does Head Start Incorporate Health Education into the Program?

One mission of the Health Component is to assist children and their families to become better prepared to meet the challenges of maintaining proper health and well being after they leave Head Start. This is the goal of Head Start health education.

Nutrition, personal hygiene, first aid and safety, and dental health were the classroom health education topics most often reported by the Health Coordinators. The Mental Health Coordinators were most likely to report that self-esteem and peer relationships were mental health topics addressed in the classroom curriculum. Both the Health and Mental Health Coordinators listed discussions and role playing activities as the activities most often used to incorporate health education into the classrooms.

Nearly all programs offer parent classes, according to the Parent Involvement Coordinators. Classes were held at least once a week by a quarter of the programs, and less than once a month by approximately 10% of the programs. Parent education topics most often recalled by parents included parenting, child growth and development, and nutrition and meal planning.

Almost the entire sample of parents noted that they discuss health topics at home with their children. Changes in either child or adult health behaviors since starting Head Start were noted by two thirds of the parents. Over one quarter of the parents and almost half of the children were described by parents as showing a general improvement in their health behaviors. One tenth of the parents felt they had developed an increased awareness of the health behaviors of their children. Over 40% of the parents reported that they had become more aware of the impact of their own health behaviors on those of their children and that their children now engaged in proper health behaviors more frequently. One tenth of the parents indicated that the child helped change the health behavior of other children or adults in their home.

12.2.11 How Successful Is Head Start in Encouraging Parents to Get Their Children Immunized?

Taken together, Head Start health records and parent-held immunization records indicate that at least 87% of the 4-year old children in Head Start are immunized at the minimum age-appropriate levels recommended by national advisors on immunization. Recently, the Centers for Disease Control and Prevention (1996) noted that only 75% of all preschool children were immunized at the same level. Further, at least 37% of the children leaving Head Start have already been immunized up to the levels recommended for kindergarten entry by those same groups, although it should be noted that many States require fewer immunizations for school entry than are recommended by national advisory groups (e.g., the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP)). Children attending Head Start programs in the South were twice as likely to be fully immunized for kindergarten (by Head Start standards) as children from programs located in other regions of the country.

A review of the parent-held records indicates that 10-15% of the children had additional immunizations that were not noted in the child health records, including additional DPT (diphtheria, pertussis, and tetanus) and OPV(oral polio vaccine). Parents obtained these immunizations for their children after the initial Head Start immunization screening, but before they left Head Start to enter kindergarten. This finding points to the benefits of drawing from multiple sources of data when assessing child health status.

Fewer than one tenth of the Health Coordinators reported accurately that 5 DPT immunizations were necessary for a 4-year-old child to be considered fully immunized under Head Start policy at the time of project data collection and only one quarter correctly noted that 4 OPV vaccinations were also required. Finally, the community health risk factor most frequently mentioned by Parent Involvement Coordinators was lack of immunizations. Both of these findings suggest that difficulties in understanding the differing levels of immunization

requirements (e.g., Head Start, State, and local requirements) may require additional training and education for both staff and parents.

12.2.12 What Are the Primary Medical Health Problems of Head Start Children?

Head Start may have positively affected the number of children receiving physical examinations in the past year by providing examinations, arranging for examinations, or assisting the families in getting the children to examinations. Parent reports, in conjunction with reviews of the child health files, indicate that 98.5% of the Head Start children received physical examinations during the past year. Over four fifths of the Health Coordinators reported that their programs provide or arrange physical examinations for children enrolled in Head Start and that over one half of these reported that examinations are conducted off-site. A review of the child health files indicated that several conditions (blood disorders, speech and language problems, hernias, and dental problems) were more likely to be identified after enrollment in Head Start.

Although data collection procedures are not quite comparable, the prevalences found for specific conditions appear to be consistent with those reported in the Child Supplement of the National Health Interview Survey (CDC, 1991). The health conditions most reported by parents were ear problems, speech and language problems, gastrointestinal problems, lower respiratory problems, and asthma. No individual condition was reported by more than one tenth of the parents. Parents of approximately 30% of the children indicated that their children had experienced two or more serious health conditions by the time of the study. The health conditions noted in the reviews of the child health files were similar to those cited by the parents, but the frequencies among the reports were generally lower than those provided by the parents. Less than 13% of the child health files indicated multiple health conditions, while almost one third of the parents reported multiple health conditions for their children. Approximately one tenth of the parents reported that serious injuries had ever occurred to their children. Injuries most reported were cuts, abrasions, and stitches for more than one

third of the children, and orthopedic injuries for just under one quarter of that group. Reports of injuries were noted in less than 8% of the child health files.

Medication was the most common treatment. However, the child health files contained little documentation about whether treatments were completed or if they were in progress or ongoing. Over 80% of the health records which reported a health condition had no follow-up data on the status of the recommended treatments.

12.2.13 What Are the Primary Dental Health Problems of Head Start Children?

Head Start positively affected the number of children receiving dental examinations in the previous year by providing examinations, arranging for examinations, or assisting the families in getting the children to examinations. Overall, parent reports, in conjunction with reviews of the child health files, indicate that 96.4% of the Head Start children received dental examinations in the past year. Over 92% of the Health Coordinators reported that their programs provide or arrange dental examinations for children enrolled in Head Start and that most of the examinations are conducted off-site. Dental conditions were among the health conditions more likely to be detected after Head Start enrollment.

Almost 42% of the parents reported that their child had an identified dental condition and over 80% of the identified conditions were dental caries. Of those parents reporting dental problems, almost 54% of the dental treatments recommended for the child's dental condition were fillings. Over 40% of the health files had no record of the findings from dental examinations. This, along with the lack of information on treatment status, point to the need for increased emphasis on follow-up by Head Start staff.

12.2.14 How Does the Health Component Integrate Mental Health Services?

One of the unique and most important aspects of the Health Component is that programs are required to foster the mental health of children, parents, and staff. Head Start's

approach to mental health is primarily from a perspective of promoting normal growth and development. However, Head Start is responsible for assuring that children receive screenings and treatment services, as needed. These services are provided either under the auspices of a Mental Health Coordinator or a trained mental health professional affiliated with each program.

Approximately 70% of the Mental Health Coordinators said that all the children in their program are screened for mental health concerns through observation of classroom or socialization group activities, and almost 90% reported that children in their programs receive individual mental health screenings if necessary.

Less than 7% of the parents reported that someone from the Head Start center had suggested that their children be evaluated for possible behavioral or emotional problems, and less than one half of these parents reported that conditions were noted by the assessments. These conditions were most likely to be speech and language problems, cognitive or developmental delays, and emotional disorders. Many parents, however, also listed speech and language concerns under medical conditions. The most common treatments following a child's mental health examination or developmental assessment, as reported in each case by one third of the parents of children needing services, were speech therapy, psychotherapy, and special education. Parents indicated that about half of the mental health treatments were in progress or ongoing.

There were several difficulties encountered in studying the mental health domain (see Chapter 10: The Mental Health Domain); however, these findings support those of other groups concerned with mental health services within Head Start (AOA, 1994) and help assure that future research on the mental health domain will be successful in painting an accurate picture of the current mental health procedures and mental health status of Head Start children. It is clear from this study and the work of the American Orthopsychiatric Association Task Force (1994) that unwritten policies are in place that protect information on

the mental health of enrolled children. These policies need to be explored to determine fully how the mental health domain operates and serves the best interests of Head Start children.

12.2.15 What Is the Nutritional Status of Head Start Children?

Almost 90% of the Nutrition Coordinators reported that all the children enrolled in their Head Start programs received individual nutrition screenings. However, nutrition summaries were available in only a small percentage of the child health files. Approximately 5% of the children had notes in their records indicating a need for nutrition services. The conditions noted in the records included the following: general suspicion of dietary problem or inadequate food intake; hemoglobin less than 11 grams or hematocrit less than 34%; the child being overweight or underweight; and the child's ratio of weight for height being greater or less than typical. Very few parents (less than 5%) reported their child being obese or underweight as a health condition. General nutrition concerns were noted by a very small percentage of the parents.

12.3 Strengths and Limitations

As a descriptive study, the findings from this project fit a specific need of the Head Start Bureau: objective information on the implementation of the Health Component. To this end, it is recognized that the study has both strengths and weaknesses. A principal strength is that this descriptive study provides a sample that is representative of the overall Head Start population. The stratification plan used for the random sample provides a representative view of the general Head Start population, allowing child-level data to be weighted and national estimates produced. This sample, in conjunction with similar data from the National Health Interview Survey (CDC, 1994), provides unique insights into the health status of Head Start children, such as the observation that the prevalences of specific conditions found for these

children do not appear to be different from those found in the general population of preschool children in the U.S.

The use of multiple data sources is an important element of the study. For example, receiving information from Head Start staff, Head Start parents, and child health records was especially useful in clarifying the immunization data. Interviews with staff and parents clearly indicated that immunization rates are higher than reflected in the Head Start records.

The study limitations include the use of Head Start child health files which were not always complete and which often varied in content from program to program. Variations across program record-keeping practices made preparation for data collections difficult, and sometimes made specific pieces of information inaccessible to the research staff.

Unfortunately, the data collection was restricted to only one visit per site. Longitudinal data reflecting the impact of the activities within the Health Component on the families would be very useful to staff in determining the distribution of program resources. The same resource limitations also precluded the collection of provider or clinic health records to supplement those held by parents or programs, as well as having direct health checks on the children.

An attempt was also made to collect budget information from the program budget managers. Unfortunately, budget practices varied greatly across programs, resulting in information that was not comparable from program to program. This precluded any opportunity to develop an understanding of the financial aspects of the Health Component.

12.4 Implications for Head Start Program Practices

After visits to 81 centers in 40 programs and completing almost 1,500 interviews with Head Start parents and staff, the picture of the Head Start Health Component is not yet complete, but it is becoming much clearer. The Head Start Bureau has the opportunity to integrate the information from this report into policy initiatives and program support. For example, information gained from this study will be useful to ACYF as it provides support and direction to local Head Start programs' efforts to implement the newly revised Head Start Program Performance Standards. Based on the findings of this study, six areas are discussed here in terms of their implications for the provision of health services within Head Start.

12.4.1 Staff Training and Support

One of the more striking findings on how programs implement the Health Component was the number of Health Coordinators who reported having multiple roles within their program. While comprehensive staff training is crucial to the provision of appropriate care and education for enrolled children, training is even more critical for staff with responsibilities for managing multiple health domains or multiple program components, as staff persons with multiple responsibilities may not have prior training or experience related to each responsibility. This issue may be particularly true for smaller programs with fewer resources for providing or accessing staff training. Data from the study suggest that component coordinators in smaller Head Start programs have fewer educational credentials, yet are far more likely to perform multiple roles. Program managers should ensure that training activities address the range of backgrounds noted among the staff, and help individuals with multiple roles develop strategies to best manage these responsibilities. Beyond the training of existing staff, the revised Program Performance Standards support the development of relationships with health professionals outside the program to assist center staff in carrying out specific health-related functions.

12.4.2 Immunizations Records and Knowledge

Improvements in record keeping strategies will help Head Start programs maintain up-to-date information on the immunization status of the children they serve. As noted earlier, between 10-15% of the children had additional immunizations noted on the parent-held records that were not found in the Head Start records.

Subsequent to the data collection for the present study, the Head Start Bureau updated the immunization requirements for children attending the program and modified the Program Information Report (PIR) reporting requirements to be consistent with these requirements. Given that the revised Program Performance Standards require programs to follow, at a minimum, the immunization schedule implemented in the Medicaid/EPSDT program in their State, technical assistance regarding the State Medicaid/EPSDT immunization requirements is needed for all health staff, not just the Health Coordinators. In addition, systems to ensure that immunization status and all relevant health information are recorded, reviewed regularly, and kept current during the program year will assure that immunization records are complete as children leave Head Start. Linkages with State health departments and Medicaid will ensure programs access to the most recent State immunization requirements and would promote “best practices.”

12.4.3 Mental Health Issues

Head Start's developmentally appropriate activities for children, and its emphasis on parent involvement, form the foundation of its role in mental health promotion and primary prevention. However, this study found that most programs' efforts to identify the mental health needs of individual children and to track the provision of services to them, were not well-documented. As suggested by the American Orthopsychiatric Association study of Head Start mental health services (AOA, 1994), programs were reluctant to identify and make referrals for mental health interventions except in the most serious cases, did not keep sufficient records about the interventions which did occur, and preferred describing concerns about children's behavior as developmental/language delay issues rather than as mental health needs. National and local leadership is needed to address Head Start staff and family attitudes

which may be limiting the provision of needed mental health services, including: concerns about the perceived stigma attached to children receiving mental health services; reluctance to record information without more certainty about the safeguards for confidentiality; and, a failure to acknowledge the costs of under-reporting mental health concerns or waiting until problem is more serious. In addition to information and training, the Head Start leadership should provide significant direction and support for developing and sustaining responsive mental health services in Head Start programs that can demonstrate more immediately to parents and staff the value of a more systematic approach to mental health intervention. Head Start programs' self-examination of mental health services in light of the revised Program Performance Standards presents a critical opportunity to implement the improvements needed.

12.4.4 Treatment Follow-Up

As part of a comprehensive health program, it is necessary for staff to receive training on the importance of carefully tracking the medical progress of the children they serve. Reviews of the child health files in the present study yielded information that indicates that Head Start children are being properly screened for medical and dental problems; however, the health files contained relatively little documentation about whether treatments actually were completed, in progress, or ongoing, as in the case of chronic health conditions. Over 80% of the health records that reported a health condition had incomplete or no follow-up data on the status of the recommended treatments. This situation does not necessarily mean that treatments are not taking place, because parents' reports indicated a higher percentage of completed treatments. It does suggest, however, that better information is needed to appropriately document and monitor the status of what happens to Head Start children when medical, dental, mental health, or nutrition screenings indicate the need for treatment services. The tracking procedures required under the revised Program Performance Standards should have a positive impact in this area.

12.4.5 Record Keeping

Continued encouragement and support for efforts such as the Head Start Family Information System (HSFIS) and other automated data collection systems containing similar data elements is needed to help programs standardize the collection of information about the families they serve as well provide a simple, automated system for updating and retrieving information on these families. Record keeping practices varied greatly across the programs and centers studied. This was particularly true for the fiscal information collected from the Budget Managers. Efforts to expand the systematic and comprehensive tracking of services consistent with the revised Program Performance Standards should improve the comparability of records across centers and programs, provide a consistent basis for national training activities related to record keeping issues, and help ensure appropriate documentation of quality service provision. Key issues in the implementation of the HSFIS or similar systems are the provision of equipment and adequate training to program staff that emphasizes the need for such information from every program.

12.4.6 Collaboration Activities

In an era that will be noted for reforms in welfare and other public assistance programs, local, Tribal, State, and Federal agencies serving low-income families have an increasing need to coordinate their services. The creation of useful community linkages for Head Start is dependent on the active integration of local programs with community and State programs as well as with other Federal resources, such as Medicaid, the United States Department of Agriculture Nutrition Programs (USDA), (e.g., the Women, Infants, and Children (WIC) program, and Temporary Assistance for Needy Families (TANF, formerly Aid to Families with Dependent Children). This study found evidence through the staff and parent reports that these activities are occurring, making it clear that Head Start does not work as a "stand alone" Federal program. However, a re-emphasis in this area is warranted in light of the revised Program Performance Standards, requiring that children be linked to a “medical home” where health services are not provided to families by Head Start. Individual Head Start programs must actively pursue partnerships with other Federal, State, Tribal, community

and local health agencies so that the combined resources maximize the health services available to children and families while containing costs to local programs.

12.5 Recommendations for Future Research

As intended, this study has helped generate ideas for future research on both the Health Component and the Head Start program in general. The following suggestions are made to help guide future research activities at Head Start programs.

- **Determining the Impact of the Program.** It is important to learn what skills families bring to Head Start, how programs can best build upon and refine these skills, and how different these skills are when they leave the program. Such findings are only possible through longitudinal research.

- **Investigating Community Links.** It was difficult in this study to clearly understand the level of formality of the Head Start-community links that have been established. It also may be necessary to survey community providers to determine, from their perspective, how Head Start serves the community and how these providers work with Head Start families. It will be important to define the barriers that inhibit the development of these links.

- **Sampling Considerations.** The development of any sampling plan intended to include appropriate representation of urban and rural programs must be able to adjust for the fact that many programs include centers that represent both types of areas. Because many program offices are located in urban areas, there may be an under-representation of rural areas in the sampling plan, and an under-representation of urban areas in the actual data collection. More information is required on individual Head Start centers and the geographic areas or populations of families they serve at the time of the drawing of the sample to ensure accurate representation.

- **Instrument Development.** A review of the findings for this study has lead the research team to conclude that instrument development activities in future projects must consider the following issues:

    (1) The costs and benefits associated with **open-ended versus limited choice questions** in the interviews;

(2) The use of **multiple data sources** for understanding differences across staff roles and to provide comparisons across sources;

(3) Exploration of the possibility of accessing the **provider health records** for a sub-sample of study children. Although this would be costly and time-consuming, actual medical records may be the closest a research team comes to accessing a "gold standard" measure of health status and medical care.

12.6 Conclusions

It seems that, in serving families, programs engage in three levels of activities: assuring that children get screenings and needed health services, that children receive preventive care, and that both children and families learn to take responsibility for their own health care. The Health Component provides the opportunity for all families to benefit by ensuring that children are as healthy as possible before they enter kindergarten through prompt diagnosis and treatment of health problems. Not all families need Head Start's assistance in accessing health services. The program is designed so that those in need of assistance receive care and these families develop the skills necessary to access appropriate care independent of Head Start.

The elements discussed in this report, including children, families, local Head Start programs and center staff, and local communities served by Head Start, fit together in an integrated view of the forces that impact on how the medical, dental, nutrition, and mental health needs of Head Start children are met. As noted in Chapter 2, Head Start children are the core of a dynamic relationship among a triad of forces (Head Start, families, and health care providers) that impact on child development. The interactions among these forces are facilitated by pathways and hindered by barriers. One primary focus for Head Start, Head Start families, and local health care providers should be to work together to develop strategies to overcome barriers so that health services can be accessed by the children who need them. This perspective may be oversimplified, but is provided to put the pieces of this report into the

context of how the Health Component of the Head Start program serves to advance the overall development of low-income children.

Clearly, the Health Component is a very valuable and unique piece of the overall Head Start program. It is hoped that the "snapshot" taken by this study will support a continued emphasis on improving the health-related activities of programs and will generate useful questions to drive future research activities. This research team completes this project with admiration and respect for both the Head Start families and the local Head Start staff members who work tirelessly, often under less than ideal working conditions, to serve children and their families. It is hoped that information gathered during this descriptive study will directly benefit their work.

The major community health risk factors that programs must address daily were noted during interviews with Head Start staff. The primary risk factors included substance abuse, lack of parenting skills, lack of available support services for families, poor nutrition, and poverty. Child abuse and neglect and community violence also were mentioned, particularly by staff responsible for mental health services. Virtually all of the program staff noted that parent education and community outreach activities are provided to address specific community risk factors.

One mission of the Health Component is to assist children and their families to become better prepared to meet the challenges of maintaining proper health and well being after they leave Head Start. This is the goal of Head Start health education.

Nutrition, personal hygiene, first aid and safety, and dental health were the classroom health education topics most often reported by the Health

Coordinators. The Mental Health Coordinators were most likely to report that self-esteem and peer relationships were mental health topics addressed in the classroom curriculum. Both the Health and Mental Health Coordinators listed discussions and role playing activities as the activities most often used to incorporate health education into the classrooms.

Nearly all programs offer parent classes, according to the Parent Involvement Coordinators. Classes were held at least once a week by a quarter of the programs, and less than once a month by approximately 10% of the programs. Parent education topics most often recalled by parents included parenting, child growth and development, and nutrition and meal planning.

Almost the entire sample of parents noted that they discuss health topics at home with their children. Changes in either child or adult health behaviors since starting Head Start were noted by two thirds of the parents. Over one quarter of the parents and almost half of the children were described by parents as showing a general improvement in their health behaviors. One tenth of the parents felt they had developed an increased awareness of the health behaviors of their children. Over 40% of the parents reported that they had become more aware of the impact of their own health behaviors on those of their children and that their children now engaged in proper health behaviors more frequently. One tenth of the parents indicated that the child helped change the health behavior of other children or adults in their home.

12.2.11 How Successful Is Head Start in Encouraging Parents to Get Their Children Immunized?

Taken together, Head Start health records and parent-held immunization records indicate that at least 87% of the 4-year old children in Head Start are immunized at the minimum age-

appropriate levels recommended by national advisors on immunization. Recently, the Centers for Disease Control and Prevention (1996) noted that only 75% of all preschool children were immunized at the same level. Further, at least 37% of the children leaving Head Start have already been immunized up to the levels recommended for kindergarten entry by those same groups, although it should be noted that many States require fewer immunizations for school entry than are recommended by national advisory groups (e.g., the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP)). Children attending Head Start programs in the South were twice as likely to be fully immunized for kindergarten (by Head Start standards) as children from programs located in other regions of the country.

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frequently mentioned by Parent Involvement Coordinators was lack of immunizations. Both of these findings suggest that difficulties in understanding the differing levels of immunization requirements (e.g., Head Start, State, and local requirements) may require additional training and education for both staff and parents.

REFERENCES

Adams, P.F., & Hardy, A.M. (1989). *Current estimates from the National Health Interview Survey, United States, 1988*. Vital Statistics, Series 10, No. 173. Hyattsville, MD: National Center for Health Statistics.

Administration for Children and Families. (1991). *Information memorandum: Medicaid/EPSDT*. Washington, DC: Head Start Bureau.

The Advisory Committee on Head Start Quality and Expansion. (1993). *Creating a 21st Century Head Start: Final Report of the Advisory Committee on Head Start Quality and Expansion*. Washington, DC: U.S. Department of Health and Human Services.

Agrons, G.A., Markowitz, R.I., & Kramer, S.S. (1993). Pulmonary tuberculosis in children. *Seminars in Roentgenology*, 28(2), 158-172.

Barnes, G.P., Parker, W.A., Lyon, T.C., Drum, M.A., & Coleman, G.C. (1992). Ethnicity, location, age, and fluoridation factors in baby bottle tooth decay and caries prevalence of Head Start children. *Public Health Reports*, 107(2), 167-173.

Bell, K.N., & Jones, J.E. (1993). *Future directions for the Head Start Health Component*. New York: National Center for Children in Poverty, Columbia University.

Binder, S., & Matte, T. (1993). Childhood lead poisoning: The impact of prevention. *Journal of the American Medical Association*, 269(13), 1679-1681.

Brush, L., Gaidurgis, A., & Best, C. (1993). *Indices of Head Start program quality*. Administration on Children, Youth and Families. Washington, DC: Pelavin Associates.

Cartland, J.D.C., & Yudkowsky, B.K. (1992). Barriers to pediatric referral in managed care systems. *Pediatrics*, 89, 183-92.

Chao, J., & Kikano, G.E. (1993). Lead poisoning in children. *American Family Physician*, 47(1), 113-120.

Children's Defense Fund. (1991). *The State of America's Children, 1991*. Washington, DC.

Estrada, A.L., Trevino, F.M., & Ray, L.A. (1990). Health care utilization barriers among Mexican Americans: Evidence from HHANES 1982-84. *American Journal of Public Health*, 80, 27-31.

Feldman, R.G., & White, R.F. (1992). Lead toxicity and disorders of learning. *Journal of Child Neurology*, 7(4), 354-359.

Fife D., Barancik J., & Chatterjee, B. (1984). Northeastern Ohio Trauma Study: II. Injury rates by age, sex, and cause. *American Journal of Public Health*, 74(5), 473-8.

Figures, C. (1977). *Report of early childhood programs health services: 1976-77*. Philadelphia, PA: Office of Research and Evaluation, Philadelphia School District.

Fosburg, L.B. (1984). *The effects of Head Start health services: Executive summary of the Head Start health evaluation*. A Report for the Administration on Children, Youth, and Families. Cambridge, MA: Abt Associates.

General Accounting Office. (1990). *Drug-exposed Infants: A generation at risk*. Washington, DC.

General Accounting Office. (1994). *Early Childhood Programs: Local Perspectives on Barriers to Providing Head Start Services. Letter Report*. Washington, DC.

Gomby, D.S., Larner, M.B., Stevenson, C.S., Lewit, E.M., & Behrman, R.E. (1995). Long-term outcomes of early childhood programs: Analysis and recommendations. *The Future of Children*, 5(3), 6-24.

Gould, M.S., Wunsch-Hitzig, R., & Dohrenwend, B. (1981). Estimating the prevalence of childhood psychopathology: A critical review. *Journal of the American Academy of Child Psychiatry*, 20(3), 462-476.

Guthrie, A.M., & McNulty, M. (1993). *Making the most of Medicaid: State progress in childhood lead poisoning prevention*. Washington, DC: Alliance to End Childhood Lead Poisoning.

Hale, B.A., Seitz, V., & Zigler, E. (1990). Health services and Head Start: A forgotten formula. *Journal of Applied Developmental Psychology*, 11, 447-458.

Halfon, N., & Newacheck, P.W. (1993). Childhood asthma and poverty: differential impacts and utilization of health services. *Pediatrics*, 91(1), 56-61.

Hansen, K.A., & Martner, J.S. (1990). *Mental health in Head Start: A wellness approach.* DHHS Publication No. (ACF) 92-31241. Washington, DC: U.S. Department of Health and Human Services.

Hayes-Bautista, D.E. (1979). Coaches, arbitrators, and access to medical care. *Journal of Health and Social Behavior*, 20(3), 52-60.

Hayes-Bautista, D.E. (1992). Latino health indicators and the underclass model: From paradox to new policy models. In A. Furino, (Ed.). *Health policy and the Hispanic*. Boulder, CO: Westview Press.

Head Start Bureau. (1988). Information Memorandum (ACYF-IM-88-16). Department of Health and Human Services. Washington, DC.

Head Start Bureau. (1994). Information Memorandum (ACYF-IM-94-13). Department of Health and Human Services. Washington, DC.

Head Start Bureau. (1992). *Head Start program performance standards (45-CFR 1304)*. DHHS Publ. No. (ACF) 92-31131. Washington, DC: U.S. Government Printing Office.

Hertzig, M.E. (1992). Mental health and developmental problems of children in poverty. *Bulletin of the New York Academy of Medicine,* 68(1), 25-31.

Hill, I.T. (1992). The role of medicaid and other government programs in providing medical care for children and pregnant women. *The Future of Children,* 2(2), 134-153.

Horwitz, S.M., & Stein, R.E.K. (1990). Health Maintenance Organizations vs. indemnity insurance for children with chronic illness: Trading gaps in coverage. *American Journal of Diseases of Children,* 144, 581-86.

Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure. (1993). *The fifth report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (JNC-V)*. Bethesda, MD: National Heart, Lung, and Blood Institute, January 1993, NIH Publication No. 93-1088.

Jones, D.B., Schlife, C.M., & Phipps, K.R. (1992). An oral health survey of head start children in Alaska: Oral health status, treatment needs, and cost of treatment. *Journal of Public Health Dentistry*, 52(2), 86-93.

Kaste, L.M., Marianos, D., Chang, R., & Phipps, K.R. (1992). The assessment of nursing caries and its relationship to high caries in the permanent dentition. *Journal of Public Health Dentistry*, 52(2), 64-68.

Katz, L., Ripa, L.W., & Petersen, M. (1992). Nursing caries in Head Start children, St. Thomas, U.S. Virgin Islands: Assessed by examiners with different dental backgrounds. *The Journal of Clinical Pediatric Dentistry*, 16(2), 124-128.

Klerman, L. (1992). Nonfinancial Barriers to the Receipt of Medical Care. *The Future of Children*, 2(2), 171-185.

Levin, A.C., Gums, J.G., & Grauer, K. (1993). Tuberculosis: The primary care physician's role in eradication. *Postgraduate Medicine*, 93(3), 46-60.

Mahaffey, K.R., Annest, J.L., Roberts, J., & Murphy, R.S. (1982). National estimates of blood lead levels: United States, 1976-1980: Association with selected demographic and socioeconomic factors. *New England Journal of Medicine*, 307(10), 573-579.

Mushak, P. (1992). Defining lead as the premiere environmental health issue for children in America: Criteria and their quantitative application. *Environmental Research*, 59(2), 281-290.

Office of Inspector General. (1993). *Evaluating Head Start expansion through performance indicators*. Washington, DC: Department of Health and Human Services.

Office of Technology Assessment. (1986). *Children's mental health: Problems and services — a background paper*. Washington, DC: U.S. Government Printing Office.

Omnibus Budget Reconciliation Act of 1989, Pub. L. No. 101-239, § 6403 (1990).

Pamuk, E.R., & Mosher, W.D. (1988). *Health aspects of pregnancy and childbirth: United States, 1982*. Vital and Health Statistics Series 23, No. 16. Hyattsville, MD: National Center for Health Statistics.

Pizzo, P.D. (1993). *Head Start and health*. New Haven, CT: Yale University Press.

Pless, C.E. & Pless, B. (1995). How well do they remember: The accuracy of parent reports. *Archives of Pediatric and Adolescent Medicine*, 149, 553-558.

Public Health Service, Centers for Disease Control and Prevention, and National Center for Health Statistics. (1993). *1991 National Health Interview Survey*. CD-ROM Series 10, No. 5. Hyattsville, MD: National Center for Health Statistics.

Public Health Service, Centers for Disease Control and Prevention, National Center for Prevention Services. (1992). *State Immunization Requirements 1991-1992*. Atlanta, GA: National Center for Prevention Services.

Rosenbaum, S. (1992). Child health and poor children. *American Behavioral Scientist*, 35(3), 275-289.

Ruff, H.A., Bijur, P.E., Markowitz, M., Yeou-Cheng, M., & Rosen, J.F. (1993). Declining blood levels and cognitive changes in moderately lead-poisoned children. *Journal of the American Medical Association*, 269 (13), 1641-1646.

Sanders-Phillips, K. (1990). *A health promotion/disease prevention model for Head Start families*. Paper presented at "New directions in child and family research: Shaping Head Start in the 90's." Administration on Children, Youth, and Families. Washington, DC, June 24-26.

Scott, M.M. (1993). *Improving services to children and families through use of a systems approach to child development*. Paper presented at "Translating research into practice: Implications for serving families with young children." The 2nd national Head Start research conference. Washington, DC, November 4-7.

Shonkoff, J., Meisels, S. 91991). Defining eligibility for Services Under PL99-457. *Journal of Early Intervention*, 15(1), 21-25.

Stansberry, S.D. (1990). Tuberculosis in infants and children. *Journal of Thoracic Imaging*, 5(2), 17-27.

Starfield, B. (1992). Effects of poverty on health status. *Bulletin of the New York Academy of Medicine*, 68(1), 17-24.

Yip, R., Scanlon, K., & Trowbridge, F. (1993). Trends and patterns in height and weight status of low-income U.S. children. *Critical Reviews on Food Science and Nutrition*, 33(4-5), 409-421.

Yudkowsky, B.K., Cartland, J.D., & Flint, S.S. (1990). Pediatrician participation in Medicaid, 1978 to 1989. *Pediatrics*, 85(4), 567-577.

Zigler, E., & Muenchow, S. (1992). *Head Start: The inside story of America's most successful educational experiment*. New York: Basic Books.

Zigler, E., & Styfco, S.J. (1993). An earlier Head Start: Planning an intervention program for economically disadvantaged families and children ages zero to three. *Zero to Three*, 14(2), 25-28.

Zigler, E., Piotrkowski, C.S., & Collins, R. (1994). Health services in Head Start. *Annual Review of Public Health*, 15, 511-534.

Zuckerman, B., Frank, D.A., Hingson, R., Amaro, H, Levenson, S.M., Kayne, H., Parker, S., Vinci, R., Aboagye, K., Fried, L.E., Cabral, H., Tinperi, R., & Bauchner, H. (1989). Effects of maternal marijuana and cocaine use on fetal growth. *New England Journal of Medicine*, 320(12), 762-768.